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First Annual Report

—— OF THE ——

BUREAU

—— OF ——

Industrial Statistics

OF MARYLAND.

A. B. HOWARD, Jr., Chief of Bureau.

1893.

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NOTICE.

Persons receiving this Report are respectfully requested to acknowledge it.

Departments or institutions publishing official reports which may be of use to the Bureau will confer a favor by forwarding exchanges.

Editors of newspapers and periodicals publishing articles connected with economic questions, or reviews on this Report, are particularly requested to mail copies to the Bureau.

Any suggestions made to the Chief of Bureau by persons interested in social or economic investigation will be thankfully received and carefully considered.

Respectfully,

A. B. HOWARD, Jr.,
Chief of Bureau.

230 North Charles Street,
Baltimore, Md.

CONTENTS.

STATE OF MARYLAND.

BUREAU OF INDUSTRIAL STATISTICS,
230 N. CHARLES STREET,
BALTIMORE, MD., March 1, 1893.

To His Excellency Frank Brown,
Governor of the State of Maryland:

SIR—I have the honor to submit for your consideration the first annual report of the Bureau of Industrial Statistics of the State of Maryland.

Very respectfully yours,

A. B. HOWARD, JR.,
Chief of Bureau.

INTRODUCTION.

It is with a full knowledge of the responsibility attaching to the proper performance of my duties that I have undertaken the work of this office. I have not lightly, nor without a due conception of the importance of such a work in all of its bearings, entered upon any part of it. Fully persuaded that such an office as this can and should be made a most important adjunct to the State government, I shall faithfully endeavor during my administration of it to place it upon such a basis that there may be assured to the people of the State the valuable results which it is their right to expect and my duty to give them.

Every public office is created for the people who support it; not to benefit the individual who may be selected to administer it. I shall know no other line of conduct than to adhere strictly to this policy, and if thus, happily, I merit the public confidence, the future usefulness of the office may with reasonable certainty be assured. If the central idea, steadily kept in view, is the subordination of all to the common welfare, the consequent attainment of the greatest possible good on the lines marked out is inevitable. He who adopts this as the guiding principle in the execution of any duty has learned well his first lesson and has gone far toward the accomplishment of the ends desired.

But without proper support, no efforts, however well directed, can secure the maximum amount of good. My exertions to carry out the provisions of the law, though they be in good faith, must fail of results unless the proper assistance is given me by the State. Whatever measure of success, therefore, may eventually be reached by this Bureau must not be judged by the results of the first year's work. It is new, and from the very nature of things largely experimental. Its usefulness in the public estimate and its ability to serve the ends of its creation have yet to be demonstrated. It is not possible, nor must it be expected, that after one year of existence, even under conditions more than ordinarily favorable, a bureau of statistics can be made capable of perfect work. It is only by slow development, patient investigation and careful study of the questions involved that this is to be done. Years may be required, indeed will be, for the perfection of a system which is to be productive of lasting results.

The conditions under which this Bureau commenced operations were not such as to warrant any very ardent hope on my part that I would be able to make any but a very small beginning in the direction desired. I assumed charge of the office without experience, without organization, without equipment, without a basis of any kind upon which to formulate my plan of action. A more careful examination of the law creating the office than I had been able to give it before entering upon my duties demonstrated, first, that the work was far in excess of what I had supposed it, and, second, that the appropriation was wholly inadequate to carry out the requirements of the law. The first was a matter of but secondary importance, the second was one for grave consideration. The Legislature directed certain things without providing the means to do them. Obviously there was nothing to be done but what was possible under the law. No one can decree the impossible. The Bureau had to be organized and put into operation with as little delay as possible; for while I was given considerable margin in the preparation of my first annual report, I was desirous that it should be completed within the year. It has been no easy task to bring the office to what small degree of perfection it may have reached; it has been only by the utmost care, by patience, by hard work and the strictest economy.

In view then of the unfavorable circumstances under which I went into office, and of the difficulties encountered in my first year of public service, I ask the public indulgence if my work falls far below the measure of their expectation. Fearful of my own shortcomings, I cannot hope that this report can escape the evidence of them. There is a misconception in the public mind as to this office, the object of its creation, its methods of work and the useful purposes which it can be made to serve. This can only be removed by good work. With that, there can be no doubt that it will receive full recognition, and in time be accorded a place in the public knowledge, which is hardly to be expected in so short a time.

That there may be a better understanding in regard to the Bureau and its workings, and a more specific insight into some of the difficulties that had to be overcome, the circumstances preceding and attendant upon its creation are of interest. The law creating the Bureau was passed by the General Assembly at the session of 1892, and went into operation March 1st of that year. Prior to that there was a Bureau of Statistics which had been in operation since 1884, and which was intended to cover in part

the same field embraced within the work of the present Bureau, but only to a limited extent. The old Bureau was established in response to a strong demand made by the labor organizations, which had then reached their greatest strength, and the scope of its work was more particularly an inquiry into labor statistics and those questions which more nearly concerned the laboring classes. Its duties were more general than specific, and it operated under a law most liberal in all its requirements, or rather in its lack of requirements.

In response to a well defined feeling that this law did not go far enough, and to meet a general demand for statistical information, the Legislature abolished the old Bureau and replaced it with the present. The State was practically without any statistics bearing upon subjects of primary importance, and which it was thought such a Bureau should investigate. But while the duties of the office were largely increased, the appropriation remained the same; nor was it given any powers to better facilitate its work. The difference can be the more readily seen by a comparison of the two laws, which are here presented. Following is the law creating the old Bureau:

"A Bureau to collect statistics and information concerning the various branches of industry practiced in this State, and the needs thereof, and the abuses that exist therein, shall be established and maintained; and the Chief of said Bureau, to be appointed by the Governor, by and with the consent of the Senate, shall make full report thereof to the General Assembly at each session thereof.

"The sum of five thousand dollars is hereby annually appropriated to pay the salaries and expenses necessary to the execution of the duties imposed upon the said Bureau by this article, and the said money, hereby annually appropriated, is hereby directed to be paid by the Treasurer of this State, upon warrant of the Comptroller, in such sums and at such times as the Governor of this State shall, from time to time, direct by his order in writing."

The law creating the new Bureau provides that "A Bureau of Statistics and information concerning the various branches of industry practiced in this State, and the needs thereof, is hereby established, and a person, to be known as the 'Chief of the Industrial Bureau,' shall be appointed by the Governor, by and with the advice and consent of the Senate, who shall hold office for a term of two years and until the appointment and qualification of his successor, and shall receive as compensation the sum of twenty-five hundred dollars a year.

"It shall be the duty of the Chief of the Industrial Bureau:

1. "To collect statistics concerning and examine into the condition of labor in this State, with especial reference to wages, and the causes of strikes and disagreements between employers and employes.

2. "To collect information in regard to the agricultural condition and products of the several counties of the State, the acreage under cultivation and planted to the various crops, the character and price of lands, the live stock, *et cetera*, and all other matters pertaining to agricultural pursuits, which may be of general interest and calculated to attract immigration to the State.

3. "To collect information in regard to the mineral products of the State, the output of mines, quarries, and so forth, and the manufacturing industries.

4. "To collect information in regard to railroads and other transportation companies, shipping and commerce.

5. "To keep a bureau of general information, and to this end all officers and institutions of this State, including officers of the General Assembly, are hereby directed to transmit to the Chief of the Industrial Bureau all reports as soon as published.

6. "To classify and arrange the information and data so obtained, and as soon as practicable, after entering upon the duties of his office, publish the same in substantial book form and annually thereafter revise and republish the same.

7. "The sum of five thousand dollars, or so much as thereof as may be necessary, is hereby annually appropriated to pay the salary of the Chief of the Industrial Bureau and the expenses incident to the execution of the duties of his office; but no part of said expenses shall be paid until the same shall have been approved by the Governor; and the said officer shall annually return to the Comptroller of the Treasury a detailed statement of said expenses, and shall also print the same in the book of statistics.

"SEC. 2. *And be it enacted*, That this act shall take effect from the date of its passage."

The vast amount of work under these heads will readily be seen. To carry out all the provisions of such a law would be practically to make a census of the State, with the very meager appropriation for expenses of all kinds of only $2,500. This includes the organization and furnishing of the office throughout, the office rent, stationery, fuel, printing, traveling expenses, clerical force—in fact, everything. The old office was without appliances or facilities of any kind; or if there were any, they have never been received by me; and the only thing acquired by

this office in the transfer was a number of reports of other State Bureaus. Under such a condition of affairs the most casual observer will see the manifest impossibility of doing such a work. I have undertaken the work, therefore, solely on the principle that "whatever is worth doing at all, is worth doing well;" and instead of attempting that which is impossible of performance, I have taken up only such subjects as it seemed possible to handle. There was of necessity great doubt in my mind as to the selection of subjects, as so many important considerations are involved in a field so large. In reaching a conclusion I have considered more carefully those things which, all in all, are of the greatest public interest, which are likely to yield the best results and could be most readily handled with the means at my disposal.

One subject of inquiry, to which particular attention has been directed, is that pertaining to agricultural pursuits and immigration, as specified in the law. Such an investigation is largely in the nature of a departure from the ordinary statistical work, but I do not consider that any of the questions involved are of more importance. Certainly none presents more obstacles, for it is a practical impossibility to secure statistics covering the entire agricultural condition of the State, as contemplated by the law, unless the Bureau is given sufficient funds to make a systematic canvass of each county by responsible and well qualified agents. This being impossible, I have been compelled to resort to the only other known method of collecting statistics, by letters and schedules. These were sent to men, carefully selected in every part of the State, whose standing and knowledge of agriculture were the best assurance I could have of interesting them in the work, to every grange in the State, the Farmer's Alliance, and to farmers' clubs. It was from the organizations particularly that I hoped to get results, and an earnest effort was made to secure their co-operation. But in only a few instances was I successful. The individual farmers to whom I wrote responded, as a rule, with much more promptness and displayed a great deal of interest in the work; but this manner of collecting statistics is an uncertain business at best, and the Bureau will not fulfill its best functions if its work has to be done to any extent in this way. In too many instances returns thus sought are either not answered at all, or are filled in so carelessly as to be useless. Still the Bureau has been as fortunate as most others, probably more so, and answers received are such that I can very safely base my report upon them. As a first step towards securing the agricultural information, I addressed the fol-

lowing letter to Mr. Henry M. Murray, of Anne Arundel county, Master of the State Grange, and to Mr. Hugh Mitchell, of Charles county, then President of the State Farmers' Alliance:

BUREAU OF INDUSTRIAL STATISTICS,

BALTIMORE, May 9, 1892.

MY DEAR SIR—An important part of my duty, under the act of the last Legislature creating this office, is to collect and publish the agricultural statistics of this State. I am required, to use the exact words of the law, "to collect information in regard to the agricultural condition and products of the several counties of the State, the acreage under cultivation and planted to the various crops, the character and price of lands, the live stock, *et cetera*, and all other matters pertaining to agricultural pursuits which may be of general interest and calculated to attract immigration to the State." You can readily see what a large field is to be covered if this work is to be properly done. The small amount of money on hand to carry on the work embarrasses me still more in doing it as I would like to.

I regard it, and I think properly, the most important of all the duties devolving upon me. The agricultural condition of the State I well know has received little or no attention at the hands of the State, and is in need of earnest endeavor in more than one direction. What I may be able to accomplish in this line it is impossible now to know, but one thing is very certain, that I can do little or nothing unless I have the sincere co-operation and aid of the agricultural community. As a means to that end, it seems to me that one of the first steps for me to take is to put myself in communication with the various agricultural organizations, the granges, Farmers' Alliance, and farmers' clubs. I am very desirous of doing this as speedily as possible, and write to you to give me your judgment as to the proper mode of procedure.

In formulating my plan of work, I see nothing that promises better results than this action I propose to take. Will you be kind enough at your earliest convenience to furnish me a list of all the local organizations in the several counties, their places of meeting, and their officers, or those with whom I will want to correspond?

In operating under the section above quoted you will, of course, see that there is a great deal more work than it specifies. It includes, for instance, the actual condition of each farm, the land

under cultivation, and abandoned land, the land worked by owner and land rented, the question of labor, kinds of labor and wages, yield and prices of crops, and, apart from the standard crops, truck, fruit, dairy products and numberless other things that it is useless for me to suggest. There are besides in each county industries of some kinds, such as canning, etc.

I believe that as soon as the people of the State see there is some real effort being made to do this work they will gladly respond and do all in their power to help it along. More especially I think this will be the case with the farmers. There is another thing to be regarded: My appropriation for expenses, as I have indicated, is small, much too small for me to carry out the provisions of the bill, including as it does, besides agricultural work, statistics of labor, manufactures, coal, transportation, etc.

I will thank you very much if you will write me in regard to these matters and give me any suggestions that may occur to you. I will also be glad, if you think it well, to call the attention of the various organizations, and of individual farmers who may be interested, and who may make suggestions, to this work and to my letter. Yours very truly,

A. B. Howard, Jr.,
Chief of Bureau.

In reply to this letter Mr. Murray wrote, commending my proposed plan of action as the only proper one, expressing the belief that the local granges would take great pleasure in filling out and returning to me all the schedules sent them, and authorizing the Secretary of the State Grange to give me the names of the secretaries of the local granges. From Mr. Mitchell I received no reply, and, as a consequence, I made no further efforts with the Alliance. I then prepared and sent out to individual farmers, to the granges, and to the farmers' clubs the following letter and schedule:

Bureau of Industrial Statistics,
Baltimore, August 24, 1892.

Dear Sir—The act of the last Legislature creating this Bureau requires that I shall "collect information in regard to the agricultural condition and products of the several counties of the State, the acreage under cultivation and planted to the various crops, the character and price of lands, the live stock and all other matters pertaining to agricultural pursuits, which may be of general interest and calculated to attract immigration to the State."

This is a most important part of my duty as I conceive it, and a matter in which I am deeply interested for official and personal reasons. I enclose a schedule which I think is sufficiently comprehensive to embrace everything contemplated by the law. You will readily see what a large field is to be covered if this work is to be properly done, and the small means at my command embarrass me still more in securing the results sought for. That being the case, I ask your most earnest co-operation in whatever way you may be able to give it. If you will do me the courtesy to answer as nearly as possible the questions contained in the schedule, or as many of them as you can, I will thank you very much, and you will greatly facilitate my work and at the same time do much toward placing this Bureau in a position for future usefulness. Some of the questions you may not be able to answer at all, nor do I expect that any of them can be answered with absolute accuracy. All I ask is that you answer them according to your best judgment, and upon such answers, coming from representative men in various parts of the State, I feel that I can safely base the report which I propose to make. One of the most important and interesting fields of inquiry, at least in many sections of the State, is in regard to farm labor and immigration. I therefore desire to call your special attention to questions 5, 6, 7 and 8, and from 10 to 23, both inclusive. I shall devote all my energies and all the available resources of this office to accomplish something in this direction. But unless I have the co-operation I ask my efforts will fall far short of the measure of success I hope to attain.

I ask all possible haste at your hands, consistent with your convenience, in returning this schedule, as it is of the utmost importance that I should have the material in hand as early in the month of September as possible. No limitations as to space are placed upon you in answering these questions, and I hope you will answer the more important ones as fully as may be agreeable to you. Yours very truly,

A. B. Howard, Jr.,
Chief of Bureau.

SCHEDULE.

1. What is the general character of soil?
2. What is the general condition of farming lands?
3. What is the average price of farming lands?
4. What is the average size of farms?

5. What is the proportion of untilled vacant and abandoned lands?

6. For what reasons are they untilled?

7. How long approximately have they remained untilled?

8. What is needed to bring them again into cultivation?

9. What is the proportion of woodland?

10. What proportion of farms is worked by owner?

11. What proportion is rented?

12. What proportion is rented to colored tenants?

13. What is the general condition of farm labor?

14. What wages are paid by the day?

15. What wages are paid by the month?

16. What are the facts in regard to the supply and demand of labor?

17. If the supply is not equal to the demand, what are the causes?

18. What are the facts in regard to the general efficiency of farm labor?

19. If there is a lack of efficiency, what are the causes?

20. What are the needs for immigrants, both as farm laborers and land owners?

21. What facilities and inducements can be offered immigrants?

22. If as land owners, at what prices and in what size tracts can land be purchased by them?

23. What, in your judgment, are the proper means for securing immigrants.

24. What is the acreage planted to the following crops: Wheat, corn, tobacco, oats, rye, buckwheat, potatoes, hay, clover, and grasses of all kinds?

25. What is the yield per acre of these crops, including clover seed when raised for market?

26. What is the acreage, and what the yield per acre, of fruit and truck when raised for market?

27. What is the average price of crops enumerated in the order above? And of fruit? And truck?

28. What are the dairy products, with prices?

29. How many creameries, if any, are in the county?

30. What is the general condition, value and number of live stock, in the order named: Horses, cattle, hogs, sheep?

31. What are the industries and manufactures of all kinds in the county?

32. What are the transportation facilities?

33. What is the present general condition of the county?

34. What, in your judgment, are its needs and possibilities?

35. Miscellaneous farm products, industries and manufactures not enumerated above?

Returns were received from only twelve granges of the forty-four in the State, and the Master of the State Grange himself, contrary to my expectation, was not one of those replying. This was not very encouraging, and, without doubt, a more thorough piece of work could have been done had the interest been taken by the people so nearly interested that was expected. The individual answers, however, were very gratifying, and it was evident that an earnest attempt was made to provide the desired information. From many of the farmers' clubs also valuable aid was received. Inasmuch as the law particularly calls attention to immigration, inasmuch as I regard that as one of the things most essential to the agricultural salvation of Maryland, and in view of the difficulties in the way of getting complete statistics, I have made the agricultural part of this report more descriptive than statistical, my object being to set forth as briefly as possible the peculiar features and inducements in this State for the purpose of attracting settlers to the now unoccupied and untilled lands.

In nearly every county in the State complaint is made of the inefficiency of the negro farm labor, a matter which is so nearly allied, under existing conditions, to immigration.

The question of farm labor in this State is one of the most serious with which the farmer is confronted. From whatever standpoint it is viewed, it is a problem hard to handle and difficult of solution. And yet it is imperative that a solution be found speedily or more serious consequences will follow than those which are already so apparent. Negro labor, which has been and is now the sole reliance of the farmers in nearly all the counties of the State, is no longer to be depended upon.

Ever since the war it has been going from bad to worse, and now it is hopelessly and utterly demoralized. In many places the farmers, instead of being able to control it, are controlled by it, and wholly subject to the whims and caprices of irresponsible men and women, who work when they choose, unmindful of any contract they have made and regardless of their employer's most vital interests. Not only is this the case with the small number of them now left on the farms and available for farm labor, but the situation is made more alarming—these words are none too strong—by the fact that there are very few of them left. The supply of farm labor is far below the demand, and will surely re-

main so until there is some radical change in the present methods. This is due to many causes, any one of which would be sufficient to affect the situation very materially. First of all, the negroes have left the counties in large numbers for the cities. With the supply thus cut short by thousands in reference to those that remain, other causes operate. In a great many instances the negroes have themselves become the workers of the land, either as owners or tenants, chiefly the latter. They supply the labor within themselves, and this means that entire families are at once and absolutely withdrawn from the general service. In many other instances they succeed in one way or another in securing enough money to insure an existence, and this done, the inborn antipathy to work asserts itself and they retire from the field of active endeavor. Many of them receive pensions from the government equal to or in excess of wages paid and quit work. Too frequently both young and old give themselves up to frivolities and personal gratifications at most inopportune times. Base-ball, picnics and other means of enjoyment and amusement give place, with them, to all consideration of more important matters, and it is no uncommon thing, but indeed quite frequent, especially in the Southern Maryland counties, to see the entire force of hands on a farm quit work at noon on Saturday in the midst of harvest to play base-ball.

The negro laborer of to-day knows, as he has never known before, how dependent the farmer is upon him; and just as long as this is the case he will be practically master of the situation. In this condition of affairs farms will remain untilled and go from bad to worse until the question solves itself in the one inevitable way, by the introduction of new labor. There can be but one way of doing this, and that is by immigration. Lands now abandoned, some of them for years, must be taken up and made productive by the infusion of this new element before there will ever be a return to agricultural prosperity in Maryland. Farms now too large for management must be cut up into smaller ones of twenty-five, fifty and one hundred acres, that they may be made available for these new tenants and more susceptible of improvement.

The time is close at hand when this new state of things will come. The farmer, in many instances, may not see it, because he does not know just how it is to come about; but the student of political economy and of the trend which affairs are taking every day around us, sees it, and welcomes its coming. There have been repeated attempts to bring about this much-needed change within recent years, and they have been made in a

variety of ways, but for as great a variety of reasons, unnecessary to be enumerated here, and, most unfortunately, they have been abortive.

That this is the case has tended in a large measure to discourage many people from the hope of any greater success hereafter. But the outlook is more promising than is generally supposed. The ebb-tide has about reached its lowest point, and the flood-tide must follow.

The proper conditions exist, the land is here, the labor is to be had by well-directed efforts in spite of past failures, and there are most encouraging indications that the means are at hand—indeed, that the seed have already been sown.

No one who is at all familiar with the present agricultural condition of Maryland can be blind to the fact that immigration is one of the most imperative and immediate needs and almost the one thing which promises relief from the depression that has existed so many years. It was with this belief before me, based on my own knowledge of the State and abundantly borne out by the returns now in this Bureau, that I instituted an inquiry upon this subject. The questions to which I called special attention in my circular letter has especial reference to this. The answers show that there are thousands of acres of land in the State that are either idle or not worked properly, chiefly because of the lack and the inefficiency of labor, and because the farms are too large. The deduction is obvious that immigration means a sub-division of large holdings, a new era of farm labor, and a more thrifty and valuable set of tenant farmers than those who are now shown in some sections of the State to be renting so large a proportion of farming lands. All this means, in short, a more intensive system of farming and speedy results from lands that are now paying taxes and producing little, if anything. It is shown that the residents of the counties are anxious to have immigrants come among them, and that there is hardly any limit to the inducements offered. Cheap lands, good lands, in any sized tracts that may be desired, a climate for healthfulness unsurpassed, beauty of scenery, locations unexcelled for comfort and convenience, abundant transportation facilities by land and water, schools, churches, congenial society, hospitality, intelligence—all these and a hundred other things are the inducements which Maryland holds out to those beyond her borders.

But it is not alone in agricultural pursuits that Maryland presents such exceptional advantages. Much of its future prosperity must be in manufactures, and the fact is evidenced that not

only are our own people, but those of other States, turning in this direction for the establishment of their business enterprises. There is not a county in the State where more than ordinary opportunities do not exist for the manufacture of almost every kind of product. Cheap and abundant raw material, sites that may be purchased at reasonable sums, with waterways unexcelled in any State in the Union, well supplemented by rail facilities, are factors that have only to be known in order that people of our own and other States may take advantage of them. A knowledge of all these things so conducive to commercial prosperity, which I have acquired both in an official and a personal capacity in traveling throughout the State, force upon me the conclusion that even the people of our own State are without a proper appreciation of the blessings by which they are surrounded in the way of natural advantages.

Nature is waiting patiently for the touch of man's hand that she may give to him the riches which are locked within her bosom.

Whatever the future agricultural prosperity of Maryland, it must be on lines far apart from those which have obtained for so many years. It cannot compete with the newer and larger wheat and corn growing States in the production of these cereals, nor is it very desirable that it should pay much attention to them so long as the one is sixty cents a bushel and the other thirty. It is in the production of fruits and vegetables that it will excel. Especially is this the case in Southern Maryland, where the light, quick soil is so beautifuly adapted to their growth. There is hardly a limit to the field for these products of the soil. By means of refrigerator cars they are now being shipped to Montreal, Quebec and other points north of us both in and out of the United States, reaching their destination in good condition and bringing high prices. Norfolk and the far South ship their products to us before our own are ready at remunerative prices. If these depended on their own consumption they would find little or no profit. It is the home product that gluts the home market, not that which comes from other points. There is always a demand for these products in our markets until our own are ready for consumption, then the prices fall, and the same complaint is heard that these things do not pay the producer. The consequence is that the producer here must look for his profits to those places where they cannot be raised until late, if at all, and where they will always command prices that will insure him a handsome net revenue. The soil of Maryland is admirably

adapted to the growth of all the fruits and vegetables which belong to this latitude. Grape culture could be carried on with handsome profits in every county in the State. And yet it is probably safe to say that the men who raise grapes for profit in this State can be counted on the fingers. It is not to be understood that everybody can or is going to jump in one year to the culture of fruits and vegetables and get rich the next. My object is only to show that future success and prosperity, as far as the cultivation of the soil is concerned, is along these lines.

The old system of agriculture went down in the wreck of other systems which followed the civil war. It has been dead for more than a quarter of a century, and yet abortive efforts have been made during all that time, and are still being made, to work on this antiquated policy. The days of the large farms, except those in the hands of wealthy men, are past. The new system has been slow of evolution, but its outlines are now so plainly seen that all who give the matter thought have but the one solution: Small farms, high culture, immigration and a change of products. It is not foreign immigration alone to which our attention should be turned, but efforts should be made to bring into our midst settlers from the North and West. Many instances have come under my observation where some of the best and most thrifty farmers from these sections have been attracted to Maryland by cheap lands and its climate. These are certainly more desirable than the best foreign element. All that is needed is a knowledge of the facts, and by all means they should have them. The magnificent fertility of the great West is no longer the attraction that it was a few years back. People think more now of their comfort and their safety of life and limb. These they cannot find in a land of cyclones and floods, and of long, dreary winters, remote from companionship and comforts. It is to Maryland that many of them are turning their thoughts. Land investors and real estate men, who have for years been operating in the far West, have repeatedly written and visited this office with a view to ascertaining the conditions which obtain here, and of transferring their interests to this State. I have also had considerable foreign correspondence upon this same subject, and it is my honest belief that Maryland could, without any very great exertion, populate her unoccupied land with citizens desirable in every respect. My investigations reveal, as shown further on in this report, the great disproportionateness between area and population in almost every county in the State, making it plain that an increased population is one of

the greatest essentials to our success. While there is some opposition to immigration, this is based entirely on the assumption that the very word "immigration" means the bringing to our shores of any and all classes of foreigners. Certainly nothing could be more erroneous. Immigrants should be sought only in those countries whose citizens are known to be generally desirable. They should have some means of their own, a knowledge of the particular thing which is to be their source of living under their changed conditions, characteristics which will enable them quickly to adapt themselves to our customs, and to affiliate with our people. They must not be paupers, criminals, heathen, imbeciles nor incompetents. We want the sturdy, honest yeomanry of such countries as Germany, Sweden, Norway and Denmark, not the "accurst," "the maim, the halt and the blind" of all nations.

I can see no other means which promise such good results in the way of securing immigration as judicious advertising of the State, and placing at least one thoroughly reliable and capable man in Europe, who shall act under special instructions and be held at all times strictly responsible for the proper execution of the duties assigned him. Much more must, of course, be done, but those things are essential. I have taken some preliminary steps looking toward securing immigrants for certain sections of the State, both by correspondence and by personal interviews; but the advent of the cholera last year and the very general fear that it will make its reappearance this year must of necessity delay all further action in the matter. Whatever steps may hereafter be taken by the State in the way of immigration, one thing must certainly be borne in mind, and that is the utter uselessness of scattering a few families here and there throughout the State. Unaccustomed to our ways and habits of life, they necessarily become lonesome and dissatisfied and leave in a little while. It is only by the establishment of colonies on large tracts of land, where these people may find their social enjoyments among themselves, and gradually get in touch with our methods, that immigration can be successfully started in Maryland.

At the session of the General Assembly of 1888, Mr. F. M. Cox, of Charles county, presented a bill to establish a State Bureau of Immigration, but it failed to become a law. The proposed Board was to be composed of three persons, one of whom was to be known as the "State Superintendent," and was to be paid $2,000 per annum. The other two members of the Board were to serve without pay. The duty of the Board was to

gather maps, pamphlets and all statistical data in relation to the geographical position of each county, its agricultural resources and capabilities, the quantities and character of lands for sale and the prices for which the same may be obtained—in fact, to keep a record of all information that might be considered advantageous for those who might desire to settle in this State. The bill also instructed the Board to encourage the formation of local boards of the same general character as the State Board. The bill further required the Superintendent of the Commission to visit Europe each year, there to remain for at least four months in the prosecution of the duties of his office, viz., the securing of desirable immigrants. It seems a matter of regret that this bill or something on that line did not become a law, as the current of events has amply proved. It was proposed by the bill to appropriate $10,000 a year to do this work.

Another interesting and promising field in Maryland is stock raising. This has made rapid and remarkable progress within the past few years, and without doubt Maryland is destined to become one of the foremost stock raising States in the Union, as its advantages become known. This is true of thoroughbred horses as well as stock of all kinds, and where a few years ago horses were but little raised for speed, some of the foremost men in the State have now their well equipped farms, stables and race tracks, and are breeding horses every year which, in all the qualities of excellence, are equal to any. Maryland has extensive areas of the finest grass lands capable of producing as fine horses as the famous blue grass region of Kentucky, and its magnificient water transportation alone, which is unequaled by any other State in the Union, is sufficient to place it far in the lead.

There is now in this State some of the finest blooded stock in the country, both running and trotting, as the turf records for the last five or six years have plainly shown. Prince George's, Frederick, Carroll and Baltimore Counties have contributed fine specimens of horse flesh to the racing and trotting world, and high prices have been paid for the stock raised in this State. It is clearly evident that the climate and pastures of the State are highly favorable to horse raising. There are many parts of the State which can be selected for the purpose of establishing good stock-raising farms for horse breeding, which at present are not utilized; the grass being filled with those nutrient elements necessary for the development of bone and muscle, thus offering great inducements to young farmers who understand this branch of agricultural industry to establish themselves with surround-

ings not to be surpassed in any part of the country. It is well known that Maryland has a plentiful supply of water courses of pure, health-giving qualities. The ground is undulating, and generally with sufficient acreage of this kind for the growth of upland meadow hay and other grasses, with long, broad tracks of land suitable for safe training and exercising ground. This will be found of advantage to those who might take up the breeding of hunters, for which every year there is a greater demand, and at good prices in this State; the cob of the English standard hackney class is much in demand in Boston, New York and Baltimore. These animals are generally of a healthy nature, and with general care can be raised to advantage, and will realize most remunerative prices.

Maryland has always been famous for her high grade cows, particularly Jerseys, Herefords, Short Horns and Devons, and has already made her market for her South Down sheep. This famous breed is largely raised in Talbot, Prince George's, Harford and other counties, and in quality is unsurpassed.

It has been a matter of regret to me that my efforts to collect statistics in regard to the canning industry, one of the most important in the State, have been unsuccessful. Letters and schedules were sent to every canning establishment in the State, as far as it was possible to ascertain them. These aggregate probably five hundred or more in the State. Only forty-six returns were made, and, of course, it is impossible to make any presentation from these. Maryland leads the tomato pack for 1892 with 977,742 cases, nearly one-third of the entire pack of the United States for that year. Harford is the leading county in this industry, but almost every county in the State is to a greater or less extent engaged in it. The indications are that there will be a larger pack of fruits and vegetables this year than usual.

Of the other subjects investigated, taxation and assessment, the oyster industry and public roads are not within the letter of the law, but are certainly covered by its spirit, for in creating a Bureau of Industrial Statistics and General Information, the Legislature certainly contemplated that the Chief of the Bureau was to understand that as meaning all questions of public interest and affecting the welfare of the people, regardless of whether the particular subject was specified in the law. All three of these subjects named were particularly opportune and important, and as the want of means prevented me absolutely from making certain other investigations provided by the law, I felt myself the more impelled to make those which were more readily obtainable, and at less cost.

Neither the time nor the means were afforded me to make any inquiry as to the transportation statistics, except those of railroad companies, further than to convince myself that it would have been a hopeless undertaking for me to make any attempt to include the various steamship and steamboat lines within my investigation.

The same is the case with shipping and commerce, manufactures and the output of mines and quarries, with the exception of coal. These things could have been collected only at great cost, involving the employment of a large force, and much more time than I had at my command. This is particularly the case with regard to manufactures, which were collected by the United States government for the eleventh census at a cost many times exceeding my appropriation to carry on my whole work. I had hoped to get these figures from the Census Office in time to use them in my report, but have been unable to do so. An earnest effort was made by me to collect statistics in regard to the manufactures in the various counties. Those that could be reached were visited personally, and to others letters and schedules were sent. In this inquiry I endeavored to ascertain the kind of establishment, the date it commenced operations, the number of employes, the wages, capital invested, cost of raw material, value of product, average daily output and annual expenses; and where children were employed, the number, sex, age, wages, hours of labor, number of months employed per year, reason of employment, age at time of employment, lost time and causes, total school attendance and nativity of parents. All these questions were legitimate and pertinent, and such as are used in all inquiries of this nature. Yet they wholly failed to elicit the information which seemed to me so desirable, either because no returns were made at all, or because they were improperly made, and it is, therefore, impossible that I can show in this report the results I had expected. Statistics of this kind certainly cannot be given by this or any other Bureau if the information is withheld by those from whom it is sought, and had better be abandoned entirely if money and time are to be wasted in fruitless efforts.

With regard to the labor statistics which the law requires this Bureau to collect, I wish to correct an erroneous impression, still prevalent to a certain extent in the public mind, that this is wholly a Bureau of that character. The law does not make it such any more than it makes it exclusively a Bureau of agricultural or any other kind of statistics. It is not its mission to do any one thing to the exclusion of others, but to carry out, as

far as may be possible, all the provisions of the law. When I entered upon the discharge of my duties I addressed communications both to the Knights of Labor and to the Federation of Labor asking for suggestions, and for their preferences as to the line of work which I should take up, and assuring them of my good-will and my desire to serve their interests fairly and impartially. The following is a copy of the letter sent to Mr. J. G. Schonfarber, then Master Workman of District Assembly 41, and Mr. George R. Heath, who was at the same time President of the Federation of Labor:

BUREAU OF INDUSTRIAL STATISTICS,
BALTIMORE, May 17, 1892.

MY DEAR SIR—In order to facilitate my work in collecting the labor statistics of the State and to secure the best possible results, I am anxious to place myself in communication with the labor organizations. I realize fully the magnitude and importance of this work, and have no other desire than to give as thorough and faithful attention to it as circumstances and the limited means at hand will allow. It is through you, as the head of the central organization, that I hope to reach the local organizations, and to secure a general interest and co-operation.

The law requires me "to collect statistics concerning and examine into the condition of labor in this State, with special reference to wages, and the causes of strikes and disagreements between employers and employes." What I will be able to accomplish will depend very largely upon the assistance that I may secure from you. Will you be kind enough to give this matter your attention at your earliest convenience, and let me hear from you? I am sure that organized labor will gladly respond to all properly directed efforts from this office, and I cordially invite any and all suggestions you may be able to make, as I desire to work largely on the lines which will be productive of the best results for those most nearly interested.

The section of the law which I have quoted you gives you only a general idea of the work which it is proposed to do, but will readily enable you to see what a large field is to be covered if it is properly done. Very truly yours,

A. B. HOWARD, JR.,
Chief of Bureau.

From Mr. Schonfarber I received a courteous reply, suggesting an investigation upon the subject of "Child Labor and its effect

on wages, morals and adult workers." Mr. Heath, representing the Federation, made no reply. That organization presented the name of one of its members for Chief of the Bureau, unmindful of the fact that it was no longer a Bureau of Labor Statistics, and, failing to secure his appointment, resolved to have no communication whatever with the office. This report has in no way suffered as a consequence of their action. I have made all the efforts I deem it proper to make to allay this feeling, and having so far done my duty as I understand it, I have proceeded on my own lines, and according to my best judgment, to do the work before me as honestly and without prejudice between employer and employe as seem possible.

A review of the strikes which occurred during the year is given, showing all the facts that it was possible to obtain. It was found that the labor organizations on strike were without any records showing lost time of its members in detail, as well as other facts which they should have had in their possession.

The coal report will show a wide range of interesting information and is largely a departure from anything of the kind undertaken heretofore, so far as I am aware. A special effort was made, and I think successfully, to make it as complete and interesting as possible.

Under the section of the law which requires me to publish in my report a detailed statement of the expenses of the Bureau for the year, I have prepared such a statement and it will be found at the end of the report.

Before concluding this part of my report, I must again return to the subject of the insufficiency of the appropriation for this Bureau. In the preparation of my first report I have been compelled to depend to a large extent on the assistance and kindly offices of men who, besides being my personal friends, had sufficient interest in the work and faith in the future usefulness of the office, if properly conducted, to further my efforts wherever and whenever possible. I desire to say here that without such aid it would have been impossible for me to have given the public all the results contained in this report. I do not hazard too much in saying that is more than any man could have done with $2,500 otherwise unaided. To all of these gentlemen, both State and county officials, and private individuals, who have contributed in any way to this work, I return my most sincere and cordial thanks. To mention them all by name would be impracticable and hardly possible, and I desire that each one of them shall take these words as applicable to himself. The only officials who uniformly disregarded my every request were the

clerks to the Boards of County Commissioners of Allegany and Anne Arundel Counties.

It is my very great pleasure also to give well earned credit to my assistants, Mr. Wm. H. Kelly and Mr. George C. Thomas, who, for faithfulness to their duties and to the best interests of the Bureau at all times and under great difficulties, and for services well rendered, have entitled them to my earnest thanks and gratitude, and no less to the most kindly consideration of the public.

At the time the Bureau was created the newspapers of Baltimore were unanimous in the opinion that the appropriation was much too small.

The usefulness of the Bureau was recognized by the *Morning Herald* in an editoral of Februrary 12, 1892, which directed attention to the enlargement of the functions of the Bureau, and predicted that the information gathered would be utilized for the purpose of attracting immigration to this State. In the same editorial the paucity of such information was deprecated, and it was declared that the greatest advantage would be derived by those seeking accurate data upon the matters to be investigated by the Bureau.

The *Sun*, in an editorial, October 25th, 1892, said: "It is the duty of the State statistician to show the wealth and resources of the State. Such a showing, if well and intelligently made, will be of great value to the State. Maryland needs capital as much as most of the States of the Union. There are portions of the State which offer admirable inducements for investment, and stand greatly in need of development. The book of State statistics is an advertisement of all these advantages, which goes to the best possible place. Unfortunately the appropriation made for this work is not sufficient for its magnitude, and the statistician finds that he is largely dependent upon the public spirit of the citizens of the State for information."

I make here a comparison between the appropriation of this State and those of other leading States having similar Bureaus, which will show our own to be almost insignificant. Massachusetts appropriates for the conduct of its Bureau $10,800 annually. In addition to its regular work the Bureau receives a special appropriation of $6,000 to make a census of the State, and in 1891 was given a special appropriation of $12,000 to investigate the tenement house system in Boston. Minnesota appropriates $8,000 for a Bureau which is wholly one of labor statistics, and an additional appropriation of $5,500 is asked for. California appropriates $10,000; Illinois, $7,500; Indiana,

$11,000, not including printing expenses; New York, $25,000; Ohio, $9,750, and an effort is being made to increase it to $15,600; New Jersey, $7,750, in addition to various supplies furnished by the State; Michigan, $8,000; Missouri, $11,000; Pennsylvania, $13,400; Connecticut, $9,000, and Wisconsin, $9,000. In nearly all of these States the Bureaus are almost wholly for the collection of labor statistics, while that, as has been shown, is but a small part of the work of this office. At the lowest calculation Maryland should appropriate twice the present amount for a work, the possibilities of which for good are almost incalculable, and certainly some provision should be made for the printing. I have already enumerated all that is required of this Bureau for $2,500, not the least of which is the printing of the report, which must be made annually, while the old Bureau made biennial reports that were printed by the State printer without the expenditure of one cent from the regular appropriation. It is my earnest hope that my work will be such as to justify me in the expectation of a more liberal appropriation by the next Legislature.

The true way to carry on the work of such an office as this is to take up one subject for each report, and go into an exhaustive investigation of that. The selection of this subject should be left largely, if not entirely, with the executive head of the office, and he should be given ample means to secure the best attainable results.

I now present the results of my investigations into the condition of the several counties of the State. These, as I have said, largely because of my failure to secure all the information sought, and because it has been my desire to set forth the advantages in a more attractive way to settlers, are more descriptive than statistical, and are based upon the returns to the schedules sent out, and already given. In answer to these numerous and, I think, far-reaching inquiries, there was, as I anticipated, a very wide divergence of opinion. Where differences existed every effort was made to reconcile them, and I think successfully, so that there is now presented for the first time some data, as nearly accurate as possible, for every county in the State. In all the counties the area given is that of the land surface only. There is a considerable difference of opinion as to the county areas, which can only be arrived at exactly by a survey of the State. Two of the most needful things for the State at this time are a survey and a good system of maps, neither of which it has had for many years, if, indeed, there has been a survey at all.

A REVIEW OF THE COUNTIES.

ALLEGANY.

Area, 477 square miles; population, 41,571; white, 40,096; negro, 1,470. Increase over 1880, 3,559, or 9.36 per cent. Area per capita, seven acres, or eighty-seven persons to a square mile. Assessed value of property, $17,992,688. County tax rate, 91¼ cents. Size of farms, 25 to 2,000 acres. Price of farming lands, $2 to $100 an acre. Principal industries, mining and manufacturing. Principal farm products, oats, potatoes, buckwheat, wheat and corn. Transportation facilities, Baltimore & Ohio, West Virginia Central & Pittsburg, George's Creek & Cumberland, Cumberland & Pennsylvania Railroads, and the Chesapeake & Ohio Canal. County seat, Cumberland.

The interests of Allegany county are essentially different from those of any other section of the State. Agriculture forms but a limited part of its production compared with the other counties, and the chief source of its wealth is its coal fields. These are in the western part of the county, covering an area of one hundred square miles, or 64,000 acres. Further reference to the coal mines is omitted here, for the reason that the coal statistics of the State are given elsewhere in this report. Apart from the mining section, a large part of the county is mountainous and broken and not adapted to agriculture. There are, however, some fine farming lands in this county, many of which are productive and in a high state of cultivation.

The best farming lands of Allegany may be divided into three sections: The first extends along the Potomac river from Westernport to Cumberland for twenty-six miles, and back from the river more than half-a-mile. This is sandy loam, and is fertile and productive. The Murley's Branch and Flintstone region, in the northeastern part of the county, is another fertile section,

consisting of a rich loam in the valleys, and a productive slate soil on the hills. The farms in this part of the county are well adapted to the growth of fruit, particularly apples, and there are many large orchards here. The same soil and character of farms continue down Flintstone Creek to Town Run, and along that stream to the eastern end of the county. The third section is the uplands overlying the coal lands, which to a great extent has been cleared of hard wood timber by the different coal companies owning them and devoted to the growing of hay and to pasture. This is also sandy loam, full of particles of Oriskaney sandstone, which forms the outcrop of the surrounding hills.

There is also some excellent farming land near Ellersly, along Will's creek, above the city and running with the Pennsylvania line toward Flintstone. This is a stiff clay loam, over the Trenton line stone, which outcrops in the narrows near Cumberland and in various points throughout the county in a northeasterly direction from Ellersly. It is the most retentive and productive soil in the county. Much of the soil is especially adapted to truck gardening. The demand for the garden products and truck is far in excess of the supply. This condition exists also with the chief farm products, hay, corn and oats, and of course the quantity of wheat grown is inadequate to supply the wants of the mills in Cumberland and elsewhere in the county. Even in the height of the season the county is a large buyer of produce from Baltimore and the eastern markets. The large number of horses and mules used in the mines creates a heavy demand for food for them, and hay, oats, corn are brought in great quantities from neighboring States and from the West. The consumption of meat is also far in excess of the quantity produced, all of which goes to show that an increased growth of food products for human and animal needs would insure profitable results in Allegany county to those who would turn their attention to this most important matter.

About two-fifths of the area of Allegany county is woodland. This woodland, if divided into small holdings, would open up a vast area upon which immigrants might settle with profit to themselves and to the county and State. A great deal of the mountain land is used for grazing purposes.

About two-thirds of the land is worked by the owners, and the balance is rented. There are few if any negro tenants. Farm laborers are scarce in many portions of the county and of an inferior character. Their pay ranges from sixty-five cents to seventy-five cents a day with board, and from one dollar to one

dollar and a half per day without board. German and Scotch immigrants are much desired, and they would find every facility for their comfort and convenience at hand. The present owners would be willing to divide the land into almost any sized tracts, and purchasers by taking one-half woodland could buy it for about six dollars an acre. A great many farmers are anxious to dispose of a portion of their holdings, as they find their farms too large.

The transportation facilities are ample, Cumberland, the county seat, being on the main line of the Baltimore and Ohio Railroad, and the West Virginia Central and Pittsburg Railway terminates at this point. There are numerous connections with these lines which enable the manufacturers and mine operators to transport their products without delay.

Coal and fire clay for making fire brick are the principal industries, giving employment to many persons. Cumberland coal has a reputation that has not been surpassed. Coke and charcoal as well as coal are cheap, and exceptional advantages are presented for iron manufacture. Iron ore is cheap at this point. These resources have resulted in the establishment of steel works and rolling mills and have brought together an industrial population of ten thousand at Cumberland.

A number of furniture and lumber mills have also been established in Cumberland and vicinity and day laborers receive about one dollar and twenty-five cents a day, and upon this amount are in a much better position to support families than those receiving the same amount in larger cities. A brick or frame house of six or seven rooms can be rented for from eight to twelve dollars a month, and many working people have built their own homes. The almost inexhaustible supply of limestone found in the vicinity of Cumberland has resulted in the manufacture in large quantities of hydraulic cement, which is considered as good as any produced in America. Among the other leading industries are glass factories, planing mills, fire brick factories, distilleries and breweries, machine shops, three large tanneries, whose output exceeds sixty thousand hides annually, pulp and paper mills, flour mills, an ice factory, lumber and brick yards, sash factories and cigar factories. Cumberland's facilities and natural advantages for manufacturing are excellent. In addition to coal and fire clay, there is also an abundance of clay for pottery, terra cotta, ornamental tiles and ordinary brick. Iron, fossil iron ore, red and brown hematite and clay iron stone are found in the mineral beds. Medina sandstone, used in the manufacture of glass, is also found in great abundance.

ANNE ARUNDEL.

Area, 400 square miles; population, 34,094; white, 19,441; negro, 14,649. Increase over 1880, 5,568, or 19.52 per cent. Area per capita, eight acres, or eighty-five persons to a square mile. Assessed value of property, $11,225,206. County tax rate, ninety-eight cents. Size of farms, 100 to 600 acres. Price of farming lands, $5 to $200 an acre. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, tobacco, rye, clover, oats, hay, fruits and vegetables. Transportation facilities, Baltimore & Ohio, Baltimore & Potomac, Annapolis, Washington & Baltimore, and Annapolis & Baltimore Short Line Railroads, Tolchester Steamboat Company, and sailing vessels. County seat, Annapolis.

The diversity of soil in this county, as well as the special mineral deposits, show a wider range in geological formation than any other section of the State. There are large areas of flat, heavy clay lands known as white oak lands, in the southern and eastern sections of the county, and these, when properly cultivated and drained, return handsome yields of the cereals and forage plants. Adjacent to the white oak lands are the rolling lands of the First and Eighth Districts which are generally designated as the West River lands, and are noted for their natural fertility, healthfulness and picturesque beauty. The lands of the Second District are of lighter texture than those of the West River section, but like them are very susceptible of improvement, and are especially adapted to the growth of the cereals, fruits and tobacco. In the production of tobacco Anne Arundel stands third on the list of the counties of the State as to the quantity produced, while as to quality the "Piney Woods" tobacco brings as high a price usually as any air-cured tobacco in the Baltimore market.

In the eastern section of the county, south of Sandy Point and adjacent to the Chesapeake Bay, is another large area of white oak lands similar to those found in the southern section. In the Third, Fourth and Fifth Districts are the famous truck lands and fruit farms for which this county is noted. The genial climate, light, quick soil, and skillful culture have resulted

in not only holding the home market of Baltimore against all comers, but have also enabled the producers to compete successfully with their fruit and berries in the Eastern, Northern and Western cities. Large quantities of these fruits and berries are also sent to the principal cities of Canada.

The special mineral deposits found in this county include marl, iron, glass sand and brick and porcelain clays. Very large and remarkably fine deposits of brick clay are found along the banks of the Patapsco river, and an increasing demand for this material shows that it is being extensively utilized. Porcelain clays are found along the shore of the Chesapeake, and are also found on each bank of the Severn river overlying the deposits of glass sand.

The growing of tobacco, wheat, corn, oats, hay and potatoes, chiefly engages the attention of the farmers of the First, Second and Eighth Districts, though considerable attention is given to the growing of peaches, and the general healthfulness of the trees tends to prove the adaptability of the soil to their cultivation. In the Third, Fourth and Fifth Districts the greatest effort has been made to supply the demand for the fruits and vegetables that form so large a part of the daily consumption of the large centres of population. It is estimated that more than a million quarts of strawberries were shipped from the county the past season, exclusive of the local demand.

In the lower portions of the county there has been great deterioration in the soil, which is partly attributable to the renting out of farms to persons who have not given the lands that care and attention which is necessary to produce the best results. The scarcity and character of labor is also, in a measure, responsible for this condition.

The price of farm lands varies greatly. In the northern part the range is from $50 to $200 an acre, while in other sections it is in some cases as low as $5. The average price is about $30. In some sections of the county from one-tenth to one-half of the farm lands are vacant or untilled, chiefly for the lack of competent labor, want of means, large farms and low price of products. A very decided improvement is manifest lately, however, in certain parts of the county, though in other parts the acreage of untilled land is apparently increasing.

About one-third of the land in the county is worked by the owners, and nearly one-half of the tenant farmers are negroes. The proportion of woodland is about one-third of the county. Most of the laborers are negroes, and many of them are wholly unreliable, frequently leaving their work when most needed.

The wages paid range from 50 cents to $1.50 a day with board, though they are generally 65 or 75 cents a day, and $10 per month with board.

The supply of labor is never equal to the demand because the negroes go to the cities in large numbers. While this is, no doubt, partly an explanation, another is often found in the bad management of the farm owners and the inadequate shelter and comforts afforded their employes. A class of industrious, intelligent immigrants is needed, not only as laborers, but as land owners. There is every inducement to attract immigrants to this section, with its fine natural advantages and cheap lands. Schools and churches are in abundance, and every facility for immigrants is afforded to either rent the land upon easy terms or to purchase it on long credit.

Lands can be purchased by immigrants or settlers in tracts of from one acre to 1,000 acres. The county is in a fair condition, though there is much complaint of high taxes. These are in part attributed to permanent improvements which necessitated extraordinary expenses not likely to be again necessary. Additional railroad facilities are very much needed, though the introduction of new industries, which has already commenced, will very likely bring about this improvement.

At South Baltimore or Curtis Bay the advantages are very great for the establishment of large manufacturing enterprises. Capital and industry have converted this place from an almost unknown section of Anne Arundel county into a place of splendid promise and almost unlimited possibilities. A sugar refinery, car works, bolt and nut factory, machine shops, furnace, and barrel factories have been successfully established here, and other enterprises are in early contemplation. An electric railway connects Curtis Bay with Baltimore.

BALTIMORE.

Area, 622 square miles; population, 72,909; white, 62,540; negro, 10,369. Decrease from 1880, 10,427, or 12.51 per cent. Area per capita, five acres, or 117 persons to a square mile. Assessed value of property $47,253,432. County tax rate, seventy cents. Size of farms, 10 to 500 acres. Price of farming lands, $20 to $500 an acre. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, oats, rye,

potatoes and truck. Transportation facilities, Baltimore & Ohio, Baltimore & Potomac, Western Maryland, Northern Central, Philadelphia, Wilmington & Baltimore, and Catonsville Short Line Railroads. County seat, Towson.

The location and splendid natural advantages of Baltimore county give it a leading position among the counties of the State and opportunities for development that are not surpassed. Its close proximity to Baltimore city makes many parts of the county particularly desirable for manufacturing purposes as well as for agricultural production. The soil is easily cultivated, and the yield of all the cereals, fruits and vegetables is abundant. The fertile valleys are well watered and the ridges heavily wooded. The beautiful scenery, the fertility of the soil and the abundant railroad facilities, with city comforts so near at hand, make almost numberless sites in its territory unexcelled for suburban residences. For grazing and stock raising it has no superior. The Chesapeake Bay and a number of rivers large and small wash its shores in part, giving it additional advantages for transportation and the growing of fruit and garden products, and for gunning and fishing. Besides the large marble and stone quarries, the special mineral deposits are manganese, ochre, marl, chrome, iron ore, pipe and brick clay and copper.

The general character of the soil varies in different parts of the county from the stiffest limestone to the lightest sand. While most of the farming lands are in a high state of cultivation, some are in poor condition. As in most of the other counties of the State, a portion of the Baltimore county lands are untilled, vacant or abandoned, but these do not exceed one-twelfth of the whole. Much of this untilled land, however, has never been cultivated, while other portions have been abandoned for the past twenty-five or thirty years. The chief needs of the county for the proper cultivation of these abandoned lands are a better class of labor, a more liberal expenditure of capital, and a subdivision of farms, which would also bring about a more general use of the woodland that comprises about one-fourth of the area of the county.

More than one-half of the farm land is worked by the owners. Of the tenant farmers, very few are negroes. Farm labor is evidently in a demoralized condition. Labor is paid one dollar per day and board, or one dollar and a half without board, but is not sufficient for the demands, and of an inferior character. The

ease with which laborers can reach Baltimore and secure employment, in a large degree accounts for the lack of a sufficient number of competent persons to properly till the soil. A great deal of public work now going on also draws away a considerable number who would otherwise work at farming. Land owners to whom these facts are apparent are anxious to have a good class of immigrants settle among them, and every inducement is offered them to come.

Baltimore county is noted for its many magnificent dairies. The herds of butter cows are known throughout the land. A number of important industries are located in Baltimore county, including cotton mills, among the largest and best equipped in the country, marble, granite and stone quarries, paper mills and canning factories. The most important industry in the county is the great works of the Maryland Steel Company at Sparrow's Point, where two thousand or more persons are employed. A number of them live in Baltimore city and go to and from their work by rail. The town itself, however, has a population of two thousand five hundred, who live in houses erected for the purpose by the company operating the works.

Many educational institutions are scattered throughout the county, among which may be mentioned the McDonogh Institute, endowed by John McDonogh, which has been in operation nearly twenty years; Convent of Notre Dame, Academy of the Visitation, Hannah More Academy, Lutherville Female Seminary, and others equally well known and valuable. The common school system has also reached a high degree of perfection and compares very favorably with any other. There are also many charitable and benevolent institutions. Chief among these are Spring Grove Asylum for the insane, Hebrew Orphan Asylum, Mount Hope Retreat and Sheppard Asylum, both for the insane. Mount Hope Retreat includes an estate of more than three hundred acres, and is thought by many to be one of the most complete and best managed institutions of its kind in the country. There are good railroad facilities in this county, and with plenty of competent labor its advancement would be even greater than at present.

The best building material in the world is found in Baltimore county. Its marble and granite are unexcelled, and synite, serpentine and various other stone is found in inexhaustible quantities. Its suburbs are beautiful and healthful, and along the well kept thoroughfares leading to the city are the beautiful residences of large numbers of business men of the city. The large

falling off in the population of Baltimore county in the last census decade is explained by the fact that within that time that part of the county known as the Belt, and which includes a large and wealthy part of its population, was included in the city. At Alberton, Weatheredville, Granite and Mount Washington are many successful manufacturing enterpises. At the latter place is one of the richest copper veins in the world, which promises before a great while to be in successful operation. For stock raising and grazing Baltimore county has no superior. The increased facilities in the way of rapid transit connecting the county with Baltimore city greatly enhances the value of its lands, and as a place for suburban residence, both for those who now live in Baltimore and for those who seek this as a field for investment, it will constantly grow in the public favor.

CALVERT.

Area, 218 square miles; population, 9,860; white, 4,757; negro, 5,103; decrease since 1880, 678, or 6.43 per cent. Area per capita, 14 acres, or 45 persons to a square mile. Assessed value of property, $2,070,443. County tax rate, $1.10. Size of farms, 20 to 500 acres. Price of farming lands, $2 to $20 an acre. Principal industry, agriculture. Principal farm products, wheat, corn, tobacco and fruit. Transportation facilities, Weems' Steamboat Line and sailing vessels. County town, Prince Frederick.

Calvert county's many natural advantages commend it to persons who desire homes in this section of the State. The county has a variety of soil, the north being mostly loam and clay, the centre of a sandy character, while the lower section includes clay, loam and sand. The farming lands are in really good condition, though owing to the sparseness of the population only to a small extent improved. Land thickly wooded with well-grown pines, poplar, hickory, oak and gum timber is to be obtained at low rates, and when cleared is very productive, as is attested by the fact that small patches taken up and cultivated even in the midst of a pine forest have been found to be well worth the labor expended. This land can be obtained at about two dollars an acre, while good cleared lands which are very productive are sold at from four to ten dollars an acre. The best river-bottom farm

lands, the finest in the county, can be secured for twenty dollars an acre. But the greater part of the county is unimproved for the only reason that the farmers are unable to cultivate more than has already been cleared.

The chief mineral deposits found in Calvert are iron ore and silica. The iron ore is of an excellent quality, but on account of the lack of railroad facilities has never been put to use. The silica mines have been worked for a number of years and have proved very profitable. The silica brought to the market is of almost unsurpassed quality. The sale of poplar and oak wood is an important source of revenue, but is limited to the forests adjacent to the rivers and bay, because of the absence of rail transportation. The water transportation is unexcelled, but for the quick transit of fruits, vegetables, and other perishable commodities, and for the thorough development of the county, a railroad is very much needed. The soil is beautifully adapted to the growth of grapes and all fruits and tobacco. Tobacco yields from five to seven hundred pounds to the acre on the better lands, though in exceptional cases there has been a larger yield. The southern slopes along the waterways are capable of the earliest production of fruits and vegetables of all kinds and of the best quality.

The oyster industry is a most important one in this county, and about fifteen hundred men and boys are employed during the season in this way. As this business requires but little capital, and as the returns are large, persons so employed make very comfortable livings, and, in many cases, own their own homes. This fact also has its effect upon farming, as those who, during the oyster season, make a good living are unwilling, and regard it as unnecessary, to devote much of their time to the cultivation of the land.

The general healthfulness of this county is undisputed. The lands are high in the centre, thus affording a natural drainage. Extremes of climate are rare. The great needs of the county are immigrants and railroad transportation. The immigrant would find here a kindly, productive soil, which with proper application would amply repay him in all the ways essential to his comfort. He would also find ample provision for the education and religious instruction of his children, the public schools, both white and colored, being in charge of competent teachers, while the churches of the various denominations are increasing yearly.

CAROLINE.

Area, 315 square miles; population, 13,903; white, 10,008; negro, 3,895. Increase over 1880, 137 or 0.10 per cent. Area per capita, fifteen acres, or forty-four persons to a square mile. Assessed value of property, $4,396,405. County tax rate, 92¼ cents. Size of farms, 10 to 500 acres. Price of farming lands, $5 to $75 an acre. Principal industries, agriculture and canning. Principal farm products, wheat, corn, hay, fruit and sweet potatoes. Transportation facilities, Delaware & Chesapeake, Cambridge & Seaford Railroads (Pennsylvania system), and the Maryland, Choptank, and Wheeler Steamboat lines. County seat, Denton.

There is perhaps no county in the State that has made greater advances in the past twenty years than Caroline. The general character of the soil is a sandy loam with clay subsoil. This sandy soil is particularly adapted to the production of small fruits and vegetables, and when properly fertilized and economically and carefully managed, yields crops that have been found more profitable than the wheat crops of the heavier clay lands. This heavier soil produces wheat and corn in abundance, the yield of wheat being sometimes as high as forty bushels to the acre. The price of good land in a convenient situation has materially increased in the past few years. Land may be obtained as low as $10 or $15 an acre.

The tendency in recent years is towards a reduction in the size of farms. This is largely due to the great agricultural advancement that has been made.

The proportion of uncultivated land in this county has been greatly reduced, and in some portions not more than one per cent. is idle, the total amount not exceeding twenty per cent. With a proper system of drainage and plenty of labor, much of this untilled land would be taken up. More than thirty per cent. of the land is worked by the owners and the balance by tenants, of whom not more than fifteen per cent. are negroes.

The general condition of farm labor is very good, their pay averaging about eighty cents a day without board, or sixty cents with board. Labor is comparatively plentiful near the towns, though somewhat scarce in the interior. When properly paid it

is easily obtainable and is efficient. A steady tide of immigration has been flowing into the county from the northern States for a number of years with most beneficial results. These settlers are cordially welcomed. Their thrift and industry has much to do with the progress of the county.

Peaches, apples, pears, plums, cherries, grapes, raspberries, blackberries and strawberries are grown in large quantities. Vegetables, other than sweet potatoes, are not very generally grown for the market.

Fruit packing is the most extensive industry in the county, two firms having an annual pack of nearly one million cans. Roller flour mills which have been established lately have a capacity of sixty-five barrels daily.

The railroad facilities are ample. The two railroads and three lines of steamboats afford the producers an opportunity to place their products in the markets of Baltimore and to points further North and East.

CARROLL.

Area, 426 square miles. Population, 32,376; white, 30,190, negro, 2,185. Increase over 1880, 1,384, or 4.47 per cent. Area per capita, 6 acres, or 76 persons to a square mile. Assessed value of property, $16,692,634. County tax rate, 50 cents. Size of farms, 25 to 300 acres. Price of farming lands, $15 to $75. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, oats, rye, hay and potatoes. Transportation facilities, Baltimore and Ohio and Western Maryland Railroads. County seat, Westminster.

Carroll county is one of the most fertile and prosperous of the counties of Maryland, and stands eleventh with respect to area of all the counties of the State. The character of the soil is varied, including limestone, red loam, blue and yellow slate and honeycomb. All of these lands are highly productive. In the German settlements, farms range from twenty-five to sixty acres, or an average of about forty acres.

There is no abandoned land in the county, and the vacant land will hardly exceed one-tenth of the total area. Of that portion under cultivation the owners work about seventy-five per cent., and the remainder is worked by tenants. The general condition

of labor is good, wages averaging from seventy-five cents to one dollar a day. The supply is for the most part equal to the demand, though sometimes during certain periods there is a scarcity, though but little complaint is made. The lack of permanency in farm work drives many of the farm hands to seek employment in the canning and fertilizing establishments, while others go to the cities. The same objection is made to negro labor in Carroll that is heard in other portions of the State where they are employed, viz., that they are shiftless and unreliable, abandoning their work at the most inopportune times, thereby causing the employer great inconvenience.

Dairy farming in Carroll is an important feature. Nearly all the farmers along the line of the Western Maryland Railroad regard their receipts from the sale of milk as a very important part of their income. Farmers living some distance from the railroad make a specialty of butter. There are also four creameries in the county.

There is but little stock raised for sale, most of it being used for home consumption.

The manufacturing establishments include seven canneries, four fertilizer factories, six tanneries, three distilleries, four paper mills, six hay and straw packing houses, four large flour mills, and various other mills, factories, foundries, machine shops, etc.

The railroad facilities of the county are not all that could be desired, as the Western Maryland Railroad is hardly able to handle all the freight during the busy season. This fact has proved a barrier to the establishment of more manufactories. With sufficient railroad facilities a great impetus would be given to manufactures in the county, and a consequent enlargement of the field for the employment of labor would follow.

CECIL.

Area, 375 square miles; population, 25,851; white, 21,850; negro, 4,001. Decrease since 1880, 1,257, or 4.64 per cent. Area per capita, nine acres, or sixty-nine persons to a square mile. Assessed value of property, $14,255,963. County tax rate, 82 cents. Size of farms, 2 to 500 acres. Price of farming lands, $10 to $150 an acre. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, oats

and hay. Transportation facilities, Philadelphia, Wilmington & Baltimore, Baltimore & Ohio, Columbia & Port Deposit, and Baltimore Central Railroads, and the Chesapeake & Delaware Canal. County seat, Elkton.

Cecil county is the most northern of the Eastern Shore counties and has, perhaps, a greater variety of soil than any similar amount of territory in the State, no ten acres being of the same quality. The farming lands on the average are in a much better condition than in former years, a result that may be largely attributed to a more intelligent use of the proper fertilizers. The price of farming lands is largely dependent on the improvements. There has been but little land abandoned in this county since the war, and the small portion that has been abandoned was owing chiefly to imperfect drainage. A good system of drainage is all that is necessary to make these lands productive and valuable.

About sixty per cent. of the farm lands are worked by the owners, and of the forty per cent. worked by the tenants, five per cent. is in the hands of negro tenants. The general condition of farm labor is fair. Wages average eighty cents a day, or about $16 a month with board, which is equal to at least $12 additional. When the manufactories are running to their full capacity, agricultural labor is somewhat scarce; but a slight increase in wages restores the equilibrium. At other times the supply of farm labor is fully equal to the demand. But little labor is employed that is unfamiliar with the work in hand.

In common with most other counties, Cecil stands in need of a greater population. The abandoned lands could then be cleared and drained, and new industries could be established, which in turn would increase the value of the local market for farm produce. The healthy climate, the cheap, though good living, the natural advantages and the closeness of the Philadelphia and Baltimore markets are among the inducements offered to immigrants to locate in this county.

On a farm of one hundred acres the average amount of woodland is about one-half. Besides the chief products of the soil, there is a small interlarding of sweet and Irish potatoes, buckwheat and garden truck. Cecil county excels in the growth of timothy hay, both as to yield and quality, and has a reputation that is almost world-wide. Some tobacco is raised in the upper districts, but the soil is well adapted to its growth.

On most farms the fruit orchards are included in the farming

grounds, while on truck farms the orchard is used for trucking until the trees grow too large. The yield of apples and peaches is large, and fairly good prices are obtained for them, comparing very favorably with the prices received in other sections of the State. The dairy products are generally sold at retail in the towns. There are two creameries, one at Chesapeake city, the other in the northern part of the county.

The manufactures of Cecil are an important factor in the county's industrial progress. There are a number of rolling mills and forges, blast furnaces, paper and flour mills, fire-brick, kaolin and pottery factories, besides the stone quarries at Port Deposit, which give employment to about 200 men. The manufacture of stoves and tin cans at Port Deposit also employs a large number of men.

The live stock of the county has been greatly improved, and the raising of stock for market has correspondingly increased. The shad and herring fisheries on the Susquehanna, Northeast and Elk rivers are also great sources of revenue, though a proper investment of capital and the employment of better methods would materially increase these. The establishment of additional canneries for the conserving of products of the water, which might be increased to an indefinite extent, is regarded as one of the most urgent needs of the county.

CHARLES.

Area, 460 square miles; population, 15,191; white, 6,975; negro, 8,216. Decrease since 1880, 3,357, or 18.10 per cent. Area per capita, nineteen acres, or thirty-three persons to a square mile. Assessed value of property, $3,462,937. County tax rate, 95 cents. Size of farms, 150 to 1,200 acres. Price of farming lands, $1 to $50 per acre. Principal industry, agriculture. Principal farm products, tobacco, wheat and corn. Transportation facilities, Baltimore & Potomac Railroad, and the Weems Steamboat Line, and Potomac Transportation Company. County seat, Port Tobacco.

In Charles county exceptional advantages are offered to the cultivator of farm produce. The soil in many portions of the county is a rich loam, which is particularly adapted to the raising of fruit and grain. In various parts of the Peninsula is also

found a substratum of marl, which renders the cultivation of these lands comparatively easy and inexpensive. The general condition of the farming lands is poor, the most of the farmers owning much more land than they can give proper attention, and the lands are, therefore, not as highly cultivated as they would be if in smaller holdings. There are in some sections, however, some notable exceptions to this rule, especially on the Potomac, Wicomico and Patuxent rivers, and in various parts of the eastern section of the county.

The size of the farms, averaging about 350 acres, is the greatest difficulty encountered by the residents of the county. Prior to 1860 this locality included a large slave-holding community, and consequently the lands were concentrated in the hands of a few owners, and, upon the emancipation of the slaves, these large holdings were suddenly left without proper labor, and the effect of this withdrawal of labor is still felt to a very great extent. It is safe to say, therefore, that at least thirty per cent. of the land under cultivation in 1860 is now abandoned. Of course much of the land is untilled, owing to the lack of means on the part of the owner, but the scarcity of labor is an important element to be considered. The negroes, to whom most of the farmers look for help, have proved a very unsatisfactory class of labor, and the young white men have generally sought employment in the cities, so there appears to be no remedy for this condition of affairs short of the introduction into the county of thrifty small farmers, who would be enabled to work the lands to the best possible advantage. Farm laborers would not be so desirable as farm owners; for though some of the present owners might take advantage of an influx of laborers, most owners would be unable to employ them profitably, as the lack of capital is greatly felt.

About one-third of the farm lands are worked by the owner, and of the two-thirds worked by tenants, at least one-half is in the hands of negroes. Laborers are paid from fifty cents to one dollar a day with board. Good labor is always in demand, and the absence of such labor has greatly restricted farming operations in recent years. From these facts it is obvious that any movement which will bring immigrants to Charles county will meet with the hearty approbation of the white residents and would result in ridding them of the indolent and unreliable negroes who are practically of no use whatever to the county. Immigrants will find congenial associations, an abundance of churches and schools, a warm and friendly reception on the part of the

residents, a benign and healthy climate, and good land well watered and abundantly timbered. This timber land when cleared is promptly responsive to the most ordinary methods of improvement. There is also to be found an abundance of fish and game and marketing facilities by railroad and navigable water. With these advantages there should be no difficulty in obtaining the better class of immigrants.

The chief product of the county is tobacco. It is upon this product that the people base all their hopes and upon which they exert all their energies and their capital. Corn, wheat, oats, rye, hay and other grasses are all produced, and some few make them specialties, but the majority grow them incidentally to the cultivation of tobacco. The average yield of tobacco is from 500 to 600 pounds to the acre.

The live stock in the county is good and the cattle have been materially improved during recent years. Hogs are not raised to any great extent. Sheep, when properly cared for, prove very profitable.

There are no manufactures in Charles. The tranportation facilities by both land and water are very good, and the close proximity of the county to Washington and Baltimore gives it an advantage which is destined to make it in the future one of the most important counties in the State.

DORCHESTER.

Area, 610 square miles; population, 24,843; white, 16,035; negro, 8,808. Increase over 1880, 1,733, or 7.50 per cent. Area per capita, sixteen acres or forty-one persons to a square mile. Assessed value of property, $6,359,877. County tax rate, 95¼ cents. Size of farms, 100 to 200 acres. Price of farming lands, $10 to $40 an acre. Principal industries, agriculture and manufactures. Principal farm products, corn, wheat, hay, potatoes and tomatoes. Transportation facilities, Dorchester & Delaware, and Baltimore & Eastern Shore Railroads, and the Maryland, Choptank, and Nanticoke Steamboat Companies. County seat, Cambridge.

Dorchester county has a light, sandy soil in the northern part, gradually becoming stiff toward the lower part where much of it

is hard clay. The surface, though level, is easy of drainage. Marl is found in large quantities and possesses splendid fertilizing qualities. On all the river and creek shores the soil is light, becoming harder in the interior of the county. The general condition of the farming lands is good, though in some portions they are suffering from neglect. The proportion of vacant and untilled land, exclusive of marsh lands, is small. Farmers do not pay any attention to the marsh lands, except for grazing, while better land is available. Occasionally efforts have been made to cultivate them; but while they have been without success, these lands can be diked, drained and made productive and profitable.

Of the land under cultivation about three fifths is worked by the owner, and of the tenant farmers about one-tenth are negroes. Farm labor in this county is generally indifferent and unreliable and the demand exceeds the supply. The wages paid average about seventy-five cents a day with board, or from twelve dollars to fifteen dollars a month. The scarcity of good farm labor is partly accounted for by the fact that most of the laborers prefer to work in the factories, especially those more or less directly connected with the oyster industry. This latter industry has taken up a great number of laborers, who at one time were engaged in farming.

There is great need, therefore, for immigrants with small capital. Lands can be purchased in tracts of from twenty acres up at low prices, and upon easy and satisfactory terms. Land in this section was never known to be cheaper than at present and the advantages offered immigrants are manifold.

Great changes have been wrought in a few years in the kind of products raised. Not half the former acreage is planted in wheat, though there has possibly been an increase in corn. Only a small proportion of oats, rye, buckwheat, potatoes, hay, clover or grasses of any kind are raised, and then only for the local market. The acreage of fruit has greatly increased in recent years, the lands being particularly adapted to fruit raising.

The transportation facilities of the county are ample. Two daily lines of steamers to and from Baltimore touch at points bordering on the Choptank river,while another line furnishes excellent transportation for both freight and passengers on the Nanticoke river. The railroad facilities are also very good.

Great interest has recently been aroused in stock raising, and the grade of stock has greatly improved. The horses though small bring good prices, and successful efforts have been made in

the breeding of trotters. Hogs and sheep are also being extensively raised, the latter being found to be particularly profitable; the supply could be materially increased, however.

Manufacturing is limited in extent yet, though the facilities are all that could be desired. The canning of oysters, fruits and vegetables is carried on extensively in Cambridge, Vienna, East New Market and other points, and gives employment to a large number of persons. At Cambridge there are also flour mills, phosphate factories and hominy mills.

FREDERICK.

Area, 633 square miles; population, 49,512; white, 42,866; negro, 6,646. Decrease since 1880, 970, or 1.92 per cent. Area per capita, eight acres, or seventy-eight persons to a square mile. Assessed value of property, $24,697,369. County tax rate, 62 cents. Size of farms, 50 to 100 acres. Price of farming lands, $20 to $100. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, hay, clover, potatoes. Transportation facilities, Baltimore & Ohio, Western Maryland, and Frederick & Pennsylvania Railroads, with branches from Rocky Ridge to Emmitsburg and from Mechanicstown to the Catoctin Iron Furnaces and the Chesapeake & Ohio Canal. County seat, Frederick.

Frederick stands second in point of area of all the counties of the State. It is also one of the most important, combining as it does, both manufacturing and agricultural industries. The soil may be divided into four kinds. In the eastern section slate land predominates, which is easily improved and yields good crops; the middle section is limestone with a subsoil of clay, and is very fertile, consisting in large part of the famous Monocacy Valley; the northwestern section is of gray sandstone, which yields readily to improvement; the western section is mostly mountainous, and the Middletown Valley, which is included in this section, is one of the most productive parts of the State. The general condition of the farm lands is good, though in some sections it could be greatly improved, especially in certain portions of the red lands.

Comparatively little of the land is untilled. About one-half

of the cultivated land is worked by the owners, and the proportion of colored tenants will not exceed one per cent. The general condition of farm labor is not all that could be desired, especially the negro labor near the towns. This class of labor is yearly becoming more unreliable. The wages range from seventy-five cents to $1 a day with board. There is a plentiful supply of an inferior class of labor; but the best labor is scarce, and when obtainable can command good wages. Good labor, as a rule, declines to remain upon a farm at small compensation, when by going to the cities they can materially increase their wages and lessen the number of hours employed. Female domestics are also in demand, and when properly qualified receive a very fair compensation.

The need for immigrants is not so widely felt in the Western counties as in other portions of the State; in fact, in many parts of Frederick county considerable opposition has been manifested towards any proposition to encourage immigration. In other sections immigrants, both as laborers and settlers, are desirable and much needed. Those intending to buy land can secure almost any size farm desired, and in certain sections at moderate cost. Frederick is the leading wheat-growing county of the State and has few superiors in the United States. A great deal of butter is made, and there are ten creameries in the county. Poultry raising has also been found fairly profitable, and chickens, turkeys and geese are raised in great abundance.

The live stock is generally well kept and is of fine quality. Thoroughbred cattle and horses, as well as sheep and hogs of excellent quality, are raised in abundance. Some of the best stock farms in the United States are in Frederick, and the stables contain some of the finest horses known to breeders.

Among the manufactories of the county are numerous flour mills, tanneries, distilleries, iron furnaces, woolen mills, a number of extensive brick yards and limekilns, brush, hosiery and ice factories and two of the largest corn canning establishments in the country. There are exceptional advantages for the establishment of manufactures in Frederick, as there is a plentiful water supply together with splendid facilities for obtaining coal by rail and water, and the timber forests of Pennsylvania and Virginia places within easy reach two of the most important accessories to the successful establishment of such enterprises.

The railroad facilities are much better than those in some other sections of the State, and a splendid limestone turnpike running through the county makes the railroad stations easily accessible.

Frederick city is the largest and most important town in the county, though a number of smaller towns are scattered throughout the county. There are one hundred and fifty-one public schoolhouses and one hundred and forty churches of all denominations, insuring excellent facilities for both secular and religious education. In fact, the general condition of the county is far above the average, though the farmers are somewhat depressed by the low price that wheat commands, but hope for better markets in the near future.

The needs of the county are a greater population and a more liberal expenditure of capital to more fully develop the natural resources.

GARRETT.

Area, 680 square miles; population, 14,213; white, 14,030; negro, 183. Increase over 1880, 2,038, or 16.74 per cent. Area per capita, twenty-eight acres, or twenty-one persons to a square mile. Assessed value of property, $4,330,745. County tax rate, $1.07. Size of farms, 50 to 250 acres. Price of farming lands, $10 to $30. Principal industries, agriculture. Principal farm products, buckwheat, oats, wheat, corn and potatoes. Transportation facilities, Baltimore & Ohio, Oakland & State Line, Cumberland & Pennsylvania and the West Virginia Central Railroads. County seat, Oakland.

By far the most serious obstacle which bars the path of Garrett county in its march towards prosperity is the small population within its borders.

While the population during the ten years from 1880 to 1890 increased from 12,300 to 14,213, the greatest increase made during that period by any county in the State, except Anne Arundel, it is still much less than is needed for the development of its vast resources. Baltimore county, which is smaller than Garrett, has a population of nearly 73,000, and at the present rate of increase, Garrett would scarcely have so great a population as Baltimore county now has in a hundred years from this time. Garrett county cannot, therefore, look to the natural increase of its population for its prosperity. It must be apparent to the most casual observer that immigration is needed, and very much needed. Immigrants are not, however, needed

so much as farm laborers, because there is not more than ten per cent. of the territory cleared and under cultivation. The other ninety per cent. is covered by virgin forests. What is needed, therefore, are purchasers for these forest lands who will fell the timber and develop the agricultural resources of the county.

There are no old, worn-out, uncultivated nor abandoned lands in Garrett county. The small percentage of the land which is cleared is being farmed. The soil is very productive, and the farmer may always expect a fair return for his labor and outlay. Fine crops are raised without the application of fertilizers. The farms are generally small, but a great deal of the timber land is owned in large bodies, as will be shown by reference to several sales which have been made lately. The "Yough Manor" tract containing nine thousand acres was sold for forty-five thousand dollars; the "Kunkle" tract, of about six thousand acres, was sold for fifty thousand dollars, and the tract called "Swanton," containing over thirty thousand acres, was sold a few months ago for fifty-four thousand dollars. All these immense bodies of land have been purchased chiefly for their timber, and can be readily obtained in small lots at very reasonable prices.

The proportion of farms under cultivation which are for sale is small. There is an advantage to purchasers in buying timber land, as in most cases they can pay for the land and support their families from the sale of timber while they are opening up farms. When they have the land cleared, they can raise better crops without the aid of fertilizers than can be raised in many places with a heavy outlay for manures. While the other resources of the county are immense, its future is agriculture. If a thrifty class of immigrants can be induced to locate here, the day is near at hand when Garrett will be one of the greatest farming counties in the State.

The farms are chiefly owned by those who cultivate them. There are, in fact, very few farms cultivated by renters. The supply of farm labor is nearly or quite equal to the demand and farm hands can be had during the busy season for seventy-five cents per day and board, while farm laborers by the year can be hired for from $120 to $150 and board. There is a large army of men employed about the numerous saw mills and lumber manufactories, which are found in almost every locality. Those who cut the timber and haul or float it to the mills generally work by contract at so much per thousand and usually make big wages. Those who work about the mills command from $1.25 to $1.50 a day. The supply of this kind of labor is equal to

the demand. Labor is much more efficient and reliable than it is in many other counties of the State, chiefly because of the fact that there is little or no negro labor. Mechanics are in demand, and command from $2 to $2.50 a day.

Immigrants will find a climate much more desirable than that of a large portion of the great Northwest and one entirely free from the great cyclones and blizzards of that section. They will find also cheap land with a rich soil, which produces the finest fruits and vegetables; they will have the advantages of good schools and churches of nearly all religious denominations, abundant employment with good wages for laborers, and excellent home markets for farm and garden produce for those who till the soil. The opportunities for those of limited means to become land owners are not excelled in any part of Maryland, if, indeed, they are in any other part of the country.

Raising cattle and sheep occupies the attention of a large class of the people. The range for cattle in the unfenced mountains and glades is almost unlimited. There are many men who, like the Western cowboy, do nothing for a livelihood except herd cattle in the summer and feed the stock in the winter. The soil produces abundant crops of hay, and there is no lack of food for winter use. The cattle and sheep grazed and fed in this section command the highest prices in the Eastern markets, and the mountain mutton of this locality is famous beyond the bounds of the State. There is not a creamery nor cheese factory in the county, but there are a number of fine openings for both. A great deal of glade butter, however, is produced, which is of superior quality and finds ready sale.

While Garrett county has all the facilities and resources necessary as a basis for great agricultural development and prosperity, it is not likely to become at any period a manufacturing centre. The largest manufacturing establishments are lumber mills. Vast sums of capital are invested in these and they furnish employment for a great many laborers. These establishments will continue until the large forests of timber are exhausted. On the east side of Backbone mountain is the Georges' Creek Coal Basin, a portion of which is in Garrett county. Along the West Virginia Central Railroad and on the Maryland side of the North Branch of the Potomac river is another large coal field which is being opened at numerous points. On Big Youghiogheny river is what is known as the "Yough Manor" coal field, which is opened also. In addition to these several fields, there are numerous mines which are being worked for private

use in the neighborhood of Accident and Grantsville. Indeed the coal supply of Garrett county is well-nigh inexhaustible, and there are also unlimited supplies of iron ore, fire clay and limestone. In the years to come, when the forests are cleared and the fertile glades and rich mountain sides yield large crops of farm products, the men who mine the minerals and those engaged in manufactures will furnish the farmer with a home market for all he can produce.

The maple sugar industry gives employment to a large number of people during a portion of the year, and brings in a large revenue to many industrious people. An annual average crop is about 225,000 pounds. If all the groves were properly cared for and worked to their full capacity, the annual output would be doubtless doubled. The sugar manufactured here sells readily for from five to eight cents a pound.

Garrett county has within her limits a number of summer resorts which bring a large number of people to this section. A large revenue accrues to the people from this source. The summer resorts are not only a source of permanent income, but will increase from year to year. No business in the county has increased so rapidly in the past ten years as this.

There is a table land reaching from Altamont on the east, to Terra Alta on the west, twenty miles wide on top of the mountains, at an altitude of twenty-seven hundred feet above tide. Here a hot night is unknown. The mercury may sometimes crawl up to eighty in the heat of the day, but even then one can feel sure he will be able to sleep under blankets at night. A large number of Baltimore, Washington and Philadelphia people have built and furnished cottages, which they occupy about five months in the year.

Garrett is much more fortunate than many of its sister counties in the transportation facilities it possesses. From Oakland to Philadelphia is about 350 miles, to Baltimore 246 miles, to Wheeling 147 miles, to Chicago 600 miles, and to Cincinnati 347 miles. All these points can be reached without change of cars from Oakland over the Baltimore & Ohio Railroad, which runs through the county, from east to west, a distance of thirty miles. The Oakland & State Line Railroad runs from Friendsville, in the county, to Confluence, on the Pittsburg & Connellsville Railroad, and furnishes an outlet to Pittsburg. The Cumberland & Pennsylvania Road runs through the Georges' Creek mining region to Cumberland, and furnishes transportation for the people in the eastern section of the county. The West

Virginia Central runs along the southern border of the county from the mouth of Savage river to the Fairfax Stone, and affords an outlet for Ryan's Glade and all that part of the county lying south of the Baltimore & Ohio. Good county roads lead from all parts of the county to the stations on the several railroads, and the numerous towns and villages along their lines furnish markets for a large proportion of the surplus produce raised in the county.

Garrett county has a great future. The people are striving to make it one of the foremost counties of the State. It is the largest of the counties. The soil is naturally fertile, and adapted to agriculture and grazing. The climate is the very best. Ninety per cent. of its vast territory is unsettled, and is ready for the thrifty man of small means. Thousands of farms can be opened and homes built at reasonable prices. The possibilities in agriculture are incalculable. Its resources in timber, coal, iron ore, fire clay and limestone are inexhaustible. Population is all that is needed to make it prosperous.

HARFORD.

Area, 422 square miles; population, 28,993; white, 22,416; negro, 6,577. Increase over 1880, 951 or 3.39 per cent. Area per capita, nine acres, or sixty-nine persons to a square mile. Assessed value of property, $12,969,194. County tax rate, $1.03. Size of farms, 50 to 500 acres. Price of farming lands, $25 to $100. Principal industries, canning and agriculture. Principal farm products, corn, wheat, hay, potatoes and tomatoes. Transportation facilities, Baltimore & Ohio, Philadelphia, Wilmington & Baltimore, and Baltimore & Lehigh Railroads. County seat, Belair.

Harford county during the past twenty years has shown a marked improvement in its farms and buildings. The general character of the soil varies from a light loam to a heavy red clay. The general condition of farms is very good, large areas of which are unsurpassed in fertility. The proportion of untilled land is probably one-fourth of the whole area, though a great deal of this is woodland. There is practically no land abandoned on account of its poor character.

About three-fourths of the cultivated land is worked by the

owners, and there are very few colored tenants, perhaps less than fifty in the whole county. Farm labor is paid from seventy-five cents to $1.50 a day with board, and is in fairly good condition. Good laborers are somewhat scarce, especially during the canning season. First-class labor is nearly always in demand.

Immigrants as land buyers would be a very welcome accession. Large tracts are not attainable, but small farms from sixty to one hundred and fifty acres can be purchased at low prices. The climatic advantages, a generous soil, hospitable neighbors and a good school system are among the inducements presented to the better class of immigrants.

Since the opening of the Maryland Central Railroad, (Baltimore & Lehigh), the milk trade has greatly increased and a daily shipment of 1,500 gallons is carried on this road. Live stock has been greatly improved of late by the introduction of superior breeds.

Canning is the most extensive industry in the county. There are 500 packing houses or more in operation in the season. The early fruits and vegetables in the spring open the factories, and they continue along until late in the winter. The entire pack of fruits and vegetables in a prosperous year aggregates nearly a million cases.

Among the manufacturing industries are paper mills, a shoe factory at Havre de Grace, and a number of carriage factories. Along the Susquehanna river duck shooting is as fine, perhaps, as in any part of the country, and the ducks from this section bring high prices. They feed on wild celery, vast beds of which are found on the Susquehanna flats. Carloads of these ducks are shipped to the North and West, and in many cases large quantities are sent to Europe. Harford is one of the leading corn-producing counties of the State.

The railroad facilities of the county are excellent.

HOWARD.

Area, 250 square miles; population, 16,269; white, 12,096, negro, 4,173. Increase over 1880, 129, or 0.80 per cent. Area per capita, nine acres, or sixty-five persons to a square mile. Assessed value of property, $7,787,400. County tax rate, 71 cents. Size of farms, 50 to 500 acres. Price of farming lands, $25 to $75 an acre. Principal industries, agriculture and manufactures.

Principal farm products, wheat, corn, hay and potatoes. Transportation facilities, Baltimore & Ohio Railroad. County seat, Ellicott City.

Howard county is, next to Calvert, the smallest county in the State. The soil is, for the most part, a clay loam, except along the Patuxent river, where it is a sandy loam, with a clay subsoil, and along the Patapsco a rotten rock or granite soil. In some parts of Howard the lands are in a high state of cultivation, while in others they are very much neglected. During the past few years the price of lands has greatly depreciated, owing largely to the poor prices obtainable for farm products, some of the products, in fact, having been sold last year at less than the cost of production. There is quite a large amount of it that remains untilled, partly on account of the lack of competent labor, and partly because of the character of the land itself, much of it being either woodland or rocky. Plenty of capital and a better quality of labor would bring much of this land under cultivation. Probably one-half of that now cultivated is worked by the owners, and of the tenants but few are negroes.

The condition of farm labor is very poor and growing worse annually. The negroes, upon whom the farmers must of necessity depend, are thoroughly unreliable and incompetent. The wages average from seventy-five cents to $1 a day with board. Farms may be purchased in small or large tracts, as desired, and low prices are the rule. Immigrants combining those desirable traits lacking in the negro farm laborers, viz., honesty, industry and frugality, will find a hearty welcome, a kind soil and educational advantages unsurpassed. Many residents of Howard are desirous that these inducements should be set before the most desirable immigrants, as many of those seeking homes in the far West would see the advantage of locating there.

The growing of tobacco in certain portions of the county has been recently started; and whenever grown, the yield has been large. Some of the land recently brought under cultivation has been devoted to fruit raising, and the experiment has proved a paying one. The railroad facilities are as good, if not better than most other counties, and farmers are thus enabled to place their products on the market at a minimum expense. The Baltimore & Ohio Railroad's main stem and the Washington branch traverse the boundaries of the county for a number of miles, and these have numerous stations situated at convenient points.

Among the manufactories are several flour and cotton mills, electric light works, canning establishments, and a paper mill. Many other manufacturing establishments, however, could be started here, as the facilities are unexcelled. The live stock has been greatly improved of late by the introduction of blooded stock, and much interest is being manifested in their improvement. Many well-conducted dairy farms are found skirting the line of the railroad and great quantities of milk and butter are shipped to Baltimore.

The educational advantages are excellent. Besides the free public schools, which are uniformly well conducted, a number of private schools of a high character have been established and are well attended.

The most urgent needs in Howard, as in many of the other counties of the State, are an increase of population, a better character of labor and a subdivision of the larger farms into small holdings.

KENT.

Area, 315 square miles; population, 17,471; white, 10,416; negro, 7,055. Decrease since 1880, 134, or 0.76 per cent. Area per capita, eleven acres, or fifty-five persons to a square mile. Assessed value of property, $7,935,093. County tax rate, 97 cents. Size of farms, 100 to 500 acres. Price of farming lands, $10 to $100. Principal industries, agriculture and manufactures. Principal farm products, fruit, wheat, corn, hay and clover seed. Transportation facilities, Baltimore & Delaware Bay Railroad (Pennsylvania System), and Chester River, Tolchester, Sassafras River and Ericsson Steamboat Companies. County seat, Chestertown.

Kent county is one of the most productive and prosperous counties in the State. The residents of this section have always been found foremost in adopting improved methods of cultivation whenever an opportunity presented itself, and the wisdom of their course has been fully verified by the advanced position this county holds. The most of the soil is a stiff loam with a red and yellow clay subsoil. Most of this land is in a fine state of productiveness and is well tilled.

The only untilled land is that which is unfit for immediate use, such as woodland and marshes.

About one-third of the land is worked by the owners, though a great many of the tenants work the land on shares, taking one-half the product. Not more than one per cent. of the tenants are negroes. The condition of farm labor is fairly good, though not as efficient as in the past. The average wages are about ninety cents a day with board, or about $18 a month. The supply of labor is quite equal to the demand.

The need for immigrants, as laborers, is not so great in Kent as in many other counties, though an influx of land purchasers would receive a hearty welcome. The need for female help is greater than any other, as the female colored domestic is inclined to indolence and is inefficient in other particulars. The farms in some sections are too large, and enterprising, thrifty and industrious immigrants with small capital, could divide them and thus work them to better advantage. Small tracts of land can be purchased, and the female members of the families can find employment.

The soil is particularly adapted to the production of the cereals, fruits and grass. Peaches especially are grown in large quantities, this county being one of the chief peach gardens in the State. The dairy products of the county are a source of considerable income to the farmers. This industry has been found to be so profitable as to cause them to make great improvements in the live stock by the introduction of superior grades of cattle.

A great number of the people look to the oyster industry for support, and there are thousands who derive their living from this source alone. The river abounds also with swan, geese and choice varieties of ducks, from the sale of which large returns are made.

The transportation facilities are very good, scarcely any section of the county being more than a half-hour's ride from a railroad station. Ample provision is also made for transportation by water. A regular line of steamboats stop at all points along the coast, and during busy seasons additional boats are pressed into service.

Among the manufacturing plants there are eight fruit canneries, a number of grist mills, paper and strawboard mills, several phosphate factories, brick works, etc. Chestertown, the county seat, offers extraordinary inducements to manufactures, as, for instance, free sites, exemption from taxation, and other advantages.

MONTGOMERY.

Area, 508 square miles; population, 27,185; white, 17,475; negro, 9,710. Increase over 1880, 2,426 or 9.8 per cent. Area per capita, twelve acres, or fifty-four persons to a square mile. Assessed value of property, $10,710,507. County tax rate, 90¼ cents. Size of farms, 50 to 1,000 acres. Price of farming lands, $15 to $100. Principal industries, agriculture and manufactures. Principal farm products, corn, wheat, oats, rye, buckwheat and truck. Transportation facilities, Baltimore & Ohio Railroad, and the Chesapeake & Ohio Canal. County seat, Rockville.

Montgomery is another one of the progressive and prosperous counties of Maryland. The general character of the soil is a rich loam, though it ranges from very light to a heavy clay of various colors from red to gray. The general condition of the farming lands is good, and in many parts of the county their capacity for production has been doubled in recent years. There is comparatively little untilled land in the county, the most of such land being woodland. About two-thirds of the land is cultivated by the owners, and of the tenants a very small percentage are negroes. The ordinary male labor is somewhat scarce and much more could be utilized. It is the female domestic help, however, which is most difficult to obtain. The better class of this labor has for the most part found more profitable employment in the cities. As regards the male labor, the better wages paid in Washington city and in the stone quarries of Montgomery has had the effect of depleting the farm labor to a very great extent. Many of those remaining are indifferent to the interests of their employer, and, in many cases, regardless of their own. The wages average from fifty cents to one dollar and a half a day with board, according to ability. The average price paid is about seventy-five cents.

The introduction of white labor would have a beneficial effect from every standpoint, though an industrious class of laborers of any kind would be gladly received, as would settlers having small capital. The latter would find a good soil, hospitable neighbors and close proximity to the excellent market of Washington city. It is true that the land brings better prices in Montgomery

county than in some others; but as the results obtained are greatly in excess of those of the cheaper lands, the increased price should not have any deterring effect upon purchasers.

If the advantages of this county were properly brought to the public attention, settlers would be readily attracted to a place where their interests would be so well cared for.

The growing of fruits has not been made a special feature and but little is raised for the market. The soil, however, is well adapted to their growth, apples, peaches, grapes and cherries being exceptionally fine.

There is one creamery in the county and a large amount of milk and butter is sent to market at remunerative prices. A large number of horses and cattle are raised. There are about two thousand head of cattle sold annually, though the tendency is towards a reduction of this number on account of Western competition. But few hogs and sheep are raised beyond the needs of the local trade.

There are splendid facilities in Montgomery for the establishment of manufactures, the great Falls of the Potomac alone having an immense power. There are already several large flour mills, while the lumber industry employs several hundred men. The transportation facilities include, besides those named, several electric roads running from Washington and others are projected. Among the needs of the county is a railroad to run from the southwestern to the northeastern part. A probable reduction in future of the tax rate is not least among the advantages held out.

PRINCE GEORGE'S.

Area, 480 square miles; population, 26,080; white, 14,835; colored, 11,245. Decrease since 1880, 371, or 1.4 per cent. Area per capita, twelve acres, or fifty-four persons to a square mile. Assessed value of property, $2,723,338. County tax rate, 80 cents. Size of farms, 50 to 500 acres. Price of farming lands, $10 to $100. Principal industries, agriculture and manufactures. Principal farm products, tobacco, corn and wheat. Transportation facilities, Baltimore & Ohio, Baltimore & Potomac Railroads, and Weems Steamboat Line. County seat, Upper Marlboro.

In Prince George's county the general character of the soil

varies. In the extreme northern portion of the county that lies directly upon the Patuxent river much of the soil is a heavy clay suitable for the cultivation of grasses and grain. The same variety of soil is also found near the Potomac river. East of this river a soft, sandy loam is found, which is also the case south of the Patuxent. Farming lands, as a general rule, are not in as good condition as they might be, owing to neglect, and their productiveness has thereby been somewhat impaired. Much of the land remains untilled, the proportion being little, if any, below one-half of the total area. A great deal of it has been abandoned owing to the scarcity of competent labor and the consequent inability of the owners to work it. This condition dates from the civil war, since which time it has been growing steadily. What is needed is a subdivision of the larger farms into small tracts, so as to enable small farmers to take them up and effectively work them. About one-half of the farms are now worked by the owners, and a very large proportion of the tenants are negroes. This is especially true in the southern, or tobacco region of the county.

The farm labor is in a demoralized condition. Prior to the civil war the labor was confined entirely to negroes. After the emancipation those who had been accustomed to the routine of the farm were found to be good and reliable hands; but as the older generation died off, the young men who remained were indisposed to work, and even when willing are wholly inefficient. The wages average about fifty cents a day with board, or about $10 a month.

In view of these facts it is evident that the need for immigrants is very great. Every inducement is presented by the county for those who would be in a position to buy small farms. The taxes are low, good educational and religious facilities are afforded, and land can be obtained in almost any size tracts on very reasonable terms.

The chief product of the county is tobacco, at least one-half of the land cultivated in the southern part of the county being used for tobacco-raising. In the upper portion of the county grasses and grain are raised, while in the districts contiguous to the District of Columbia trucking is the principal pursuit. The raising of fruits, which is comparatively small at present, is on the increase and good returns follow well directed efforts in this direction.

Most of the live stock raised is used on the farms, each farmer endeavoring to supply his own needs in this regard. But little is raised for the market. This is also true with respect to dairy products.

Though manufacturing industries are few in the county, the conditions are excellent for their establishment. There is a large smelting furnace at Muirkirk and a very large hosiery manufactory is conducted at the House of Reformation at Cheltenham, the inmates supplying the labor necessary. In addition to these there are a number of canneries in operation during the season.

The general condition of the county is not good, though it has made some advances. Its close proximity to Washington city places a market within easy reach, which, when the population is considered, is hardly surpassed in the county.

The needs of Prince George's are an increased population, a greater number of land owners, as distinguished from renters, and a better class of laborers. With these needs supplied it would not be long before the county would make rapid strides in the line of progress.

QUEEN ANNE'S.

Area, 352 square miles; population, 18,461; white, 11,816; negro, 6,645. Decrease since 1880, 796 or 4.13 per cent. Area per capita, twelve acres, or fifty-two persons to a square mile. Assessed value of property, $7,900,996. County tax rate, 89 cents. Size of farms, 100 to 500 acres. Price of farming lands, $10 to $75 an acre. Principal industries, agriculture and oystering. Principal farm products, wheat, corn, oats, rye and fruit. Transportation facilities, Queen Anne's & Kent Railroad and Chester River Steamboat Company. County seat, Centreville.

Of all the Eastern Shore counties, none present greater attractions than Queen Anne's. The climate is a delightful one, the soil is extremely productive, and in the rivers and bay surrounding its shores are found an abundance of oysters, terrapin, fish and crabs. Game is also plentiful along the shore.

The general condition of the soil is mostly of a rich loam, with a clay subsoil, and is highly productive. The farms are in fine condition, having been very much improved in recent years. But little of the land remains untilled, apart from the marsh and woodland. Of that land under cultivation, about one-half is cultivated by the owners and the other half is rented. About one-twentieth of the tenants are negroes.

The daily wages of farm labor range from fifty cents to $1.25. The character of the labor is below the average and the supply is entirely inadequate, many of those who would be adapted to the work having engaged in the oyster industry. The only apparent remedy for this condition of affairs is immigration. Immigrants are desirable both as farm laborers and land owners. As farm laborers they would find good houses and splendid school facilities; as buyers they will find plenty of farms for sale, both large and small. The larger ones could be purchased for colonies and afterwards subdivided in tracts to suit each settler.

The natural advantages of the county, once made known to the class which it is desirable to attract, could scarcely fail to be productive of the most beneficial results, both to the county and to settlers. There are, indeed, few sections of the country that produce finer crops than this county. Fruits are raised in abundance. In 1891 the production was 100,000 baskets and boxes of peaches, 20,000 baskets of pears, 5,000 crates of strawberries and blackberries, while thousands of bushels of apples were left to rot in the orchards or to be eaten by the hogs, because the farmers were so overwhelmed with other things as to leave them no opportunity to properly care for them.

There are four creameries in this county and the products are sold in the towns at very fair prices. The live stock is well-cared for and plentiful. Great improvement has been made in the live stock in recent years, and the careful attention bestowed upon the stock is having good results. Good work horses bring from $100 to $125; cows, from $20 to $60; steers, $60 to $175 a pair; beef cattle, about one cent a pound less than Baltimore prices; hogs, from five to eight cents a pound, and sheep from $4 to $10 each.

There is but little manufacturing in this county, the great mass of the people being engaged either in farming or in the oyster and fish industries. There are, however, three canneries and three flour mills, the product of which is shipped to other States. The transportation facilities by land and water are good.

The county is exceptionally healthy. Among its greatest needs are good farm labor and the establishment of manufacturing enterprises.

ST. MARY'S.

Area, 360 square miles; population, 15,819; white, 8,060; negro, 7,759. Decrease since 1880, 1,115, or 6.58 per cent. Area per capita, fourteen acres or forty-three persons to a square

mile. Assessed value of property, $2,788,389. County tax rate, $1. Size of farms, 50 to 1,000 acres. Price of farming lands, $4 to $75. Principal industries, agriculture and oystering. Principal farm products, corn, wheat and tobacco. Transportation facilities, Maryland and Virginia and Weems' Steamboat Lines. County seat, Leonardtown.

The county contains within its area almost every character of soil. A loam underlaid by a clay subsoil predominates. About one-third of the land, other than woodland, remains untilled. The land untilled is generally of such a character as to require an expenditure for fertilizers, which the farmers are either unwilling or unable to make. There is also a certain amount of land now held in large tracts which remains uncultivated owing to the inability of the present owners to work it all to advantage. The greatest need to bring these lands under cultivation is increased capital, which would make these lands as productive as those now worked.

The price of lands in the interior of the county is merely nominal, much of it selling for $3 or $4 an acre, while that contiguous to the water sells for from $10 to $30 an acre, and in some exceptional cases at a higher rate. The size of the farms also varies according to location. Along the water front there are many farms from four hundred to five hundred acres, and some of one hundred or two hundred acres, but in the interior the holdings are very much smaller.

Nearly all the small farms are worked by the owners, while of the water lands about one-half are worked by tenants. The proportion of colored tenants is small, most of them working farms on shares.

The farm labor is very inefficient, and is entirely unequal to the demand, because a large number of men are withdrawn from the farm by the oyster industry. There are fully two thousand men and boys who annually engage in this business because it is more profitable than farm work. The farmers are thus left to rely upon such labor as can be found. The wages of the farm laborers average about fifty cents a day or $10 a month, with board.

The need for immigration in this county is, therefore, very great. Immigrants with small capital will find plenty of land at a low rate, and those without sufficient capital to buy can rent

upon easy terms, either for part of the product or for cash. Immigrants as laborers could find remunerative employment when they are competent workers, a healthy climate, churches of nearly every denomination, and an abundance of good schools.

The live stock is in a fairly good condition, bringing as good prices as can be obtained in any other portion of the State. The general condition of the county is not good. The people who have to depend on agriculture for a livelihood are very much depressed, owing to the exceedingly low prices of farm products which have prevailed for five years past. The transportation facilities by water are excellent, there being three steamers a week to Baltimore and five to Washington from the Potomac river side of the county, and from the Patuxent river side two steamers a week to Baltimore. In the fruit season the steamers make daily trips. Rail transportation, however, is one of the most urgent needs of the county.

SOMERSET.

Area, 526 square miles; population, 24,155; white, 14,502; negro, 9,653. Increase over 1880, 2,487, or 11.48 per cent. Area per capita, fourteen acres, or forty-six persons to a square mile. Assessed value of property, $4,226,650. County tax rate, ninety cents. Size of farms, 8 to 1,000 acres. Price of farming lands, $10 to $50. Principal industries, oystering and agriculture. Principal farm products, wheat, corn, oats and rye. Transportation facilities, New York, Philadelphia & Norfolk, and Baltimore & Eastern Shore Railroads, Eastern Shore, Manokin River, and the Maryland Steamboat Companies. County seat, Princess Anne.

Somerset is the leading oyster county of the State, a great many of its inhabitants relying entirely upon this industry for support. That they secure it is amply attested by the fact that those engaged in that business decline to work at farming unless very high wages are offered.

The soil is mostly of pipe clay with some mixture of red clay. Much of it is uncultivated, and much of the portion that is worked is cultivated on the "skimming system." The consequence is that old and cleared lands, which with a small outlay could be made very productive, are allowed to go to waste and

new lands are cleared up only to become in the same condition as the others after a time. The size of the farms varies greatly in some sections, especially along the water courses.

The large farms of 1,000 acres or more are in the interior. Much of the uncultivated land could be obtained on easy terms by immigrants. Labor is badly needed, as well as capital, to properly develop the resources of the county. At least two-thirds of the land is worked by the owners, and there are but few colored tenants. The wages of labor average from seventy-five cents to $1 a day, with board, or from $10 to $15 a month. There is not much hiring by the month, as the negro laborer is not willing to work steadily. This labor has proved just as inefficient in this section as in the other counties of the State, and an influx of immigrants, who are capable and industrious, would materially assist in a restoration of the neglected land to its proper condition.

The production of cereals, which was a feature in this county some years ago, has given place to the production of fruits to a great extent. The mild climate and soils are well adapted to fruit growing and truck farming, and strawberries, peas, wax-beans, tomatoes, potatoes, etc., are raised in great abundance. Strawberries are an especially good crop, and they are shipped in large quantities. Peaches are also largely grown.

Dairy products, except for home use and consumption, are not raised to any great extent. Among the manufacturing enterprises are two flour mills at Princess Anne and one at Westover. There are also several steam saw mills and canning factories in the county which employ a great many persons. The oyster industry employs thousands of people in the winter season, while in summer the crabbing interest, which has grown to large proportions, employs nearly as many.

The steamboats and railroads afford ample opportunity to ship the products of the county to the Northern and Western markets.

The chief needs of the county are capital, good management and a better class of labor. These needs supplied, the county could comfortably support many times its present population.

TALBOT.

Area, 285 square miles; population, 19,735; white, 12,148; negro, 7,587. Increase over 1880, 671, or 3.52 per cent. Area per capita, nine acres or sixty-nine persons to a square mile.

Assessed value of property, $9,148,848. County tax rate, seventy-eight cents. Size of farms, 100 to 500 acres. Price of farming lands, $10 to $75 an acre. Principal industries, agriculture and manufactures. Principal farm products, wheat, corn, oats, hay and fruit. Transportation facilities, Delaware & Chesapeake and Baltimore & Eastern Shore Railroads, Maryland, Choptank, and Wheeler Steamboat Companies. County seat, Easton.

The soil varies from the stiffest to the lightest in character, light loam, however, largely predominating. It is naturally productive, and such of it as has been overworked responds readily to fertilization. The farm lands generally are in good condition, the tendency of the farmers being to improve as far as circumstances will allow. The farm lands contiguous to the water bring from $40 to $60 an acre, while those situated at some distance from the water front can be obtained from $30 to $50 an acre. Practically all the suitable land is under cultivation. Two-thirds of the farm lands are cultivated by the owners and not more than one-tenth of the farms rented have negro tenants.

The farm labor is very unsatisfactory. The most of the labor is drawn from the negro population with a white man as foreman. Living is cheap, and anything like privation and want is very exceptional among those of them able and willing to work. They have as many comforts and their general condition is as good or better than that of laborers in towns or cities where they receive much higher wages. Laborers employed by the year receive $10 a month, the white foreman being paid $12.50, both with board. Wages by the day vary with the season from fifty cents a day, with board, in winter, to seventy-five cents, $1 and $1.25 a day with board during harvest time.

The demand for labor during the oyster season very often exceeds the supply, as the higher compensation in the oyster industry tempts the best hands to desert the farm. At other times fairly good labor can be obtained, though the negroes require constant watching to prevent them from shirking their work—a characteristic so general among them.

There is a pressing need for immigrants, both as laborers and purchasers of land. As to the latter, the inducements offered include cheap lands in tracts to suit, a productive soil and unusual facilities for reaching the markets of Baltimore, Philadelphia and

New York. For laborers of the better class liberal wages are offered and are more than ample to supply a comfortable living. The climate is genial and healthy, and the residents of the county are very hospitable and would extend a cordial welcome to immigrants. There is but little truck raised for the market, except tomatoes and corn for the local canning houses. The chief fruit cultivated is peaches, which are raised in large quantities.

At present there is but one creamery in the county, though the establishment of others is in contemplation. The live stock is in excellent condition, and the county is well supplied with fine horses, cattle, hogs and sheep. The introduction of well bred stock has materially assisted in raising the standard.

This county is essentially an agricultural one, and the manu factures are chiefly such as may be considered accessories to the agricultural interest. They are flour mills, phosphate and canning factories, strawboard paper mill, planing mill, brick and tile yard, basket and broom factories and ship yard. There are excellent advantages for the establishment of woollen mills and other important industries.

The irregularity of the yield of crops, the low prices and other local causes have contributed to bring about some not altogether satisfactory conditions that now exist. These conditions would doubtless be materially changed with an influx of capital and a more efficient charaeter of labor. Talbot has an unusually large number of incorporated towns, several of them having a population of considerably over 1,000. All of these have a large volume of trade, particularly Easton, which draws from all of the surrounding counties.

WASHINGTON.

Area, 435 square miles; population, 39,782; white, 37,191; negro, 2,590. Increase over 1880, 1,221, or 3.17 per cent. Area per capita, nearly seven acres, or ninety-one persons to a square mile. Assessed value of property, $18,397,999. County tax rate, 78 cents. Size of farms, from 75 to 300 acres. Priee of farming lands, $10 to $150 an acre. Principal industries, manufactures and agriculture. Principal farm products, wheat, corn, oats and hay. Transportation facilities, Chesapeake & Ohio Canal, Baltimore & Ohio, Western Maryland, and the Baltimore

& Cumberland Valley Railroads. The Pennsylvania Road also reaches the county by its Cumberland Valley Branch. County seat, Hagerstown.

Washington county is directly west of Frederick and extends to Allegany in the neck of the State. Its eastern boundary is the crest of South Mountain, thirty miles in length. Mason and Dixon's line is its northern limit, forty-six miles, dividing it from Pennsylvania. Sidling Hill Creek separates it from Allegany county, whilst the southern boundary, nearly a hundred miles long in its meandering, is the southern margin of the Potomac river. The county is traversed by the eastern spurs of the Allegany Mountains, the eastern wall being known as North Mountain. North Mountain is parallel with South Mountain and about fifteen miles distant. Between the two lies the magnificent valley of the Antietam and Conococheague. It is the extension of the valley of Virginia. Northward, through Pennsylvania, the same valley extends and is then known as the Cumberland Valley. West of North Mountain there are numerous ridges, enclosing between them some fertile valleys; but in the main this part of the county is rugged and, land, some of which is well adapted to fruit growing or sheep raising can be purchased at low cost. In the southeastern part of the county there is a spur of South Mountain, whose southern extremity is Maryland Heights, whence it extends about ten miles north, forming between it and South Mountain a fertile valley known as Pleasant Valley.

The main valley, which comprises the greater portion of the county, is drained by the Antietam and Conococheague creeks.

The soil, except one or two ridges of slate land, is limestone, highly cultivated, highly improved, and of great natural fertility.

The soil of Pleasant Valley and of the Western Neck, is freestone, not naturally so fertile as the limestone, but susceptible of improvement and producing a finer quality of wheat than limestone land. In the main valley there are frequent springs of pure and wholesome limestone water gushing from the rocks in great volume. The slate and freestone lands are even better watered, and there are numerous springs on every farm.

The climate is pleasant and healthful, not so mild in winter as in the tidewater counties of the State, but in summer pleasant and bracing, with nights generally cool, and it is safe to say that Washington county is absolutely free from all endemic diseases.

There are churches of nearly all the Christian denominations in various parts of the county, and the public free schools are

admirably sustained. No farm in the county is remote from a church or school.

Markets are no less convenient. Every kind of farm produce can be sold in Hagerstown to the very best advantage, and in every neighborhood there is a flouring mill where the wheat crop can be sold. The competition among buyers is so spirited that the very highest price is paid.

The productions of the county are varied. The most important crop is wheat, in the production of which it stands among the first counties of the Union, the total yield being nearly a million and a half bushels. But little of this is shipped from the county, as it is converted into flour in the numerous excellent mills and shipped to New York and Baltimore in that shape.

While wheat is the principal crop, the aggregate of other crops far surpasses it in value. The shipments of clover seed, fruit, dairy and poultry products are prodigious. Corn is largely grown and the yield to the acre is great, but by far the largest portion of the crop is fed to cattle and sold as meat.

All fruits which belong to the latitude flourish and are abundant. Every farm has a large apple orchard, grapes flourish and are fast becoming a money crop. Plums, cherries and apricots and the small berries are equally abundant. Within the past few years it has been discovered that a belt of land extending along the foot of South Mountain is peculiarly adapted to the growth of peaches and a great industry in raising this fruit at once was established. Land which had previously been valued only for the timber on it, and which would bring but some $5 per acre, at once became valuable and prices advanced to $50, $75, or even more.

Near Hancock and Sharpsburg there are quarries where admirable cement is produced.

Hagerstown, because of its great advantages, is a considerable manufacturing center. It is accessible, being within two and a half hours of Baltimore and Washington, six hours of Philadelphia and nine hours of New York, with frequent trains by different routes to all those places. Strangers who wish to settle in Washington county can buy property cheap and will be most kindly received.

The principal manufactures are steam engines and boilers, agricultural machinery, spokes and rims, furniture, fertilizers, flour, paper, wagons, wrought iron tubes, silk ribbons, gloves, hosiery and underwear.

The county is grid-ironed with railroads. The main line of

the Baltimore & Ohio road passes through the southern extremity from Knoxville to Harper's Ferry and then skirts the southern border of the western districts for fifteen or twenty miles. From Weverton it reaches up to Hagerstown by the Washington county branch, which extends twenty-four miles through Pleasant Valley and the southern districts. The main line of the Western Maryland extends westward to Williamsport and on to Cherry Run, connecting with the Baltimore & Ohio and giving facilities to a rich portion of the county. Eastward the main line extends over South Mountain to Baltimore. At the foot of the mountain the Baltimore & Cumberland Valley road branches off and extends to Shippensburg, where it connects with the Reading system and affords it a western outlet via Cherry Run. On the top of the mountain another line branches off through Gettysburg and York and Adams counties, in Pennsylvania. The great Pennsylvania system reaches Washington county by its Cumberland Valley branch, which extends across the county from Mason and Dixon's line through Hagerstown to the Potomac below Williamsport and on to Winchester, Va. Seventeen miles of the Norfolk & Western road are in Washington county, Hagerstown being the northern terminus of that great system, giving access to every portion of the South. Thus Hagerstown has competing lines to every important place in the country. In addition to these unsurpassed railroad facilities, Washington county possesses more miles of turnpike roads than any county in the United States. Every road leading into Hagerstown is macadamized with limestone, which makes the smoothest and best roads attainable. One of these roads is the old National pike, which passes through the entire length of the county, over forty miles.

WICOMICO.

Area, 365 square miles; population, 19,930; white, 14,600; negro, 5,330. Increase over 1880, 1,914, or 10.62 per cent. Area per capita, twelve acres, or fifty-four persons to a square mile. Assessed value of property, $4,340,374. County tax rate, 82½ cents. Size of farms, 100 to 500 acres. Price of farming lands, $5 to $100. Principal farm products, corn, wheat, strawberries and melons. Principal industries, agriculture and manufactures. Transportation facilities, New York,

Philadelphia & Norfolk, Baltimore & Eastern Shore, and Wicomico & Pocomoke Railroads, and Maryland Steamboat Company. County seat, Salisbury.

The soil is of a diversified character and includes red clay, black gum, swamp, and very light sand soils, with all the intermediate grades of grey loamy soils which predominate and which are particularly adapted to the growing of corn, strawberries, melons, peaches and other small fruits and truck. A large part of the land stands in fine timber that is increasing in value very fast.

In that portion of the county bounded by the Pocomoke river on the east and the Delaware line on the north and northeast, a black loam soil is found, which is the most productive corn and oat land in the county. In the sections bordering on the Wicomico & Pocomoke Railroad, where the land is higher, grass is grown abundantly, and in dry seasons the strawberry crop is large.

The southwest part of the county, including Quantico and a part of Tyaskin, is stiff, of white and red clay, well adapted to corn, wheat, oats, grasses and anything that a stiff soil will produce. The wheat and clover fields in this section will compare favorably with those of any of the upper counties.

The necessity for improved farm machinery is beginning to be generally felt, and the latest implements are being rapidly introduced.

The general condition of the farm lands is not good, and, including woodland, fully one-half remains uncultivated. This condition is owing to the inability of the owners to work the land and to the insufficiency of labor. Poor crops for several years past have also had a dispiriting effect on the farmers.

About one-half of the land under cultivation is worked by the owners and not more than one-twentieth of the tenants are negroes. Farm labor is unreliable and scarce, as many laborers are engaged in the oyster industry. The wages paid to farm labor are from fifty cents to $1 a day with board, according to ability. Immigrants who would be able to buy their farms would be a welcome acquisition, as a more extensive system of farming would result. Immigrants will find an abundance of cheap lands, a healthful climate and excellent inducements. The lands can be purchased in almost any size tracts, and for $10 an acre land in fairly good situation can be obtained. The general condition of the live stock is good and the best prices are obtained for those sent to the market.

Among the industries in the county is the manufacture of pine lumber and gum timber into oil and fruit can cases, peach and strawberry baskets and building materials; canning, machine shop, hub factory, saw and flour mills, shipyard and a box shook factory. There are ample transportation facilities by rail and water.

The greatest need of the county is an increase of capital, so that improved ideas in farming could be more generally adopted.

The principal manufacturing industry of the county is the lumber business. About 14,000,000 feet of planed lumber are manufactured annually. Of this quantity Salisbury has nearly 8,000,000. In addition to this, between 8,000,000 and 9,000,000 feet of Virginia boards are used for making oil cases. A large quantity of the home-made lumber is utilized by different factories in manufacturing peach baskets and strawberry crates and boxes. The business is growing extensively, and nearly every town has its factory.

There are large quantities of bog iron ore, just above Barren Creek Springs, that await enterprise and capital for development. On the streams are several mills, with an adequate supply of water for manufacturing purposes.

Salisbury is one of the most flourishing and enterprising towns on the peninsula. The annual volume of its mercantile business is over $1,000,000. There are also a number of prosperous towns and the county is progressing in all directions.

WORCESTER.

Area, 475 square miles; population, 19,747; white, 12,893; negro, 6,854. Increase over 1880, 208, or 1.06 per cent. Area per capita, nearly sixteen acres, or forty-one persons to a square mile. Assessed value of property, $4,690,802. County tax rate, 75 cents. Size of farms, 100 to 600 acres. Price of farming lands, $5 to $50 an acre. Principal industries, agriculture and manufactures. Principal farm products, corn, wheat, oats, rye, sweet and Irish potatoes, fruit and truck. Transportation facilities, Delaware, Maryland & Virginia and the Baltimore & Eastern Shore Railroads, and Eastern Shore Steamboat Company. County seat, Snow Hill.

The soil of this county, like that in other portions of the State, varies in good proportion from stiff red, white and yellow clay, with light loamy surface, to a black gum. The farm lands in some portions of the county are considerably run down, though upon the whole are in a fair condition, and the proportion of untilled or abandoned land is small. The chief thing needed to bring these lands under cultivation is an increase of capital with which to buy stock, fertilizers, etc. Not more than one-fourth of the land is worked by the owners, the balance under cultivation being worked by tenants. But few of the latter are negroes.

The most valuable lands, perhaps, are those with a surface of light loam and red clay subsoil, which occupy the largest area. This kind of soil is easily cultivated, yielding—with the application of barnyard manure, compost or some commercial fertilizer—remunerative crops of cereals, and of every variety of produce found in this latitude. The land is eminently adapted for the cultivation of vegetables, including sweet and Irish potatoes, peas, beans, melons, etc., large quantities of which are annually raised and shipped to the cities of Baltimore, Philadelphia and New York.

The capabilities of Worcester county lands, as to extent of acreage and all the favorable incidents of adaptation, are not half utilized. Clover, timothy, orchard grass, alfalfa and all the grasses are successfully grown and used for hay and pasturage. On the seaside farms, which border the county on one side for a distance of forty miles, are hundreds of acres of soft marsh, in considerable degree covered with a natural grass, luxuriant and valuable, furnishing pasturing for large herds of stock and rich hay for animals in winter quarters.

Agricultural implements of improved kinds are coming more and more into general use. Every season there is an increased demand for reapers, mowers, drills, planters, harrows, etc.

Much more interest is manifested in improved stock than formerly. This includes all varieties of stock—horses, cattle, sheep and hogs. In some isolated places in remote points of the county, where formerly stock of all kinds was of the most inferior grade, may now be found on farms belonging to the poorest farmer, fine specimens of horses and cattle.

The general condition of farm labor is not good, many of those who would otherwise be employed on the farm securing employment at the mills and factories or engage in the oyster industry. The pay of farm hands is from 75 cents to $1 a day with board. Immigrants would be welcomed to this county, more especially

those who have sufficient means to buy their own farms and work them. Tracts in sizes to suit and at low prices are easily obtainable, and if this class of immigrants could be persuaded to go to Worcester in sufficient numbers, the result would be a gratifying advance in the prosperity of the county. Among the more important manufacturing industries are cotton yarn, whip, and sash and blind factories and canning establishments. These industries employ a considerable number of the inhabitants, though there is a pressing need for the increase of these and similar industries.

On the best improved lands the yield of crops is as great as in almost any other portion of the State. A very fair price is received for dairy products, though the stock and neglected pastures are not at all remunerative. While this is generally true, in certain portions of the county a great improvement has recently taken place. The river, bays and creeks are abundantly stocked with shad, herring, perch, rock, trout, sheepshead and other fish. Oysters are also plentiful, and many of the residents derive their chief support from this source.

SOME SELECTED ANSWERS.

Failure in some instances to secure answers to all of the questions embraced in the schedule, and in others such answers as were available, have made it impossible to obtain information sought upon many interesting points. Such, for instance, as the acreage, yield and value of crops, fruit and truck, the dairy products and the number, value and condition of live stock. These things must be the subjects of special and close investigation in order to secure actual results. Enough answers were received, however, to enable me to set forth a great many facts of leading interest.

There is a striking unanimity in the answers to some of the more important subjects of inquiry. Almost with one accord the answer comes from different sections of the State that the essentials to success are an increased population, increased capital, smaller farms, a better class of labor, more capable tenant farmers, a change of production, manufactures, and, in many sections, increased railroad facilities. It is conclusively shown that the colored population, with doubtless some honorable exceptions, is wholly incompetent to meet the demands upon it, either as tenants or as farm laborers. It is at the same time

but just to them to say that a greater regard for their comfort and convenience, and increased wages on the part of many employers, would doubtless secure better results; but these instances are so few compared with the whole number that there does not seem to be much hope for improvement short of an entire change in the labor and tenant systems. It is shown that soil, climate, the low price of lands, the great quantity of land untilled for the want of persons properly equipped to do it, the great diversity of production of which it is capable, and other causes no less potent, all combine to prove that this is the State and this the time to begin the change in both, which cannot be much longer delayed. Appended are some of the more striking answers received to inquiries made, selected without any special reference to locality:

ANNE ARUNDEL COUNTY.

"What is needed to bring them (the lands) into cultivation?"

Intelligent labor, capital and new blood.

"What is the general condition of farm labor?"

Physical, good; mental, improving; moral, very bad; financial, excellent, for they get all the money that comes into the county; capacity for work, very small.

"What are the needs for immigration, both as farm laborers and as land owners?"

The settling here of industrious white immigrants would be greatly to the advantage of the land owners, and a wholesome example to the colored laborers.

PRINCE GEORGE'S COUNTY.

We unquestionably need immigration. There is more need for the introduction of those who would come prepared to buy our lands and settle upon them than there is for the bringing in that class who would hire for the season. The one would necessitate the cutting up into smaller farms our already too large ones, and by becoming the owners of land would at once improve and build them up, thus increasing our tax-paying class, while the other immigrants, being strangers to our methods of work and our crops, as well as in most cases to our language, would require to be educated before they could be efficient as farm hands.

"What facilities and inducements can be offered immigrants?"

ANNE ARUNDEL COUNTY.

I have four hundred acres that I will divide into farms of from fifty to one hundred acres, and lease on ten years time at $40 an acre, six per cent. interest, taxes to be paid by myself. The right to be given party leasing to buy out at any time after five years at price named. Improvements to be made by lessor, and be repaid for same if at the end of the lease he does not buy.

ST. MARY'S COUNTY.

Cheap land, a salubrious and healthy climate, soil capable of being made highly productive, and a willingness on the part of the land owners to sell their lands on easy terms.

"What, in your judgment, are the proper means for securing immigrants?"

CHARLES COUNTY.

Formation of local organizations throughout the State of those who have lands to sell, under some system similar to our organization here. It requires capital to advertise and bring these matters to the attention of the outside world. This of itself will do no good unless the community to which you direct the immigrant has some organization to which the immigrant can be sent. Some such plan, fully matured would result in great good to the agricultural sections of the State.

HARFORD COUNTY.

Have a plat made marking all boundaries of farms, streams and woods. Explain quality and condition of soil; what prices they can be bought for; school houses and churches; railroad facilities, etc. Then secure a fund and select a good man to communicate with parties wishing to immigrate.

ST. MARY'S COUNTY.

The establishment of agencies in those parts of Europe whence immigrants may be expected. Or, the dissemination of pamphlets containing a description of our advantages, etc., to be translated into the languages of those to whom we may appeal.

FREDERICK COUNTY.

Let landed owners offer homes for say fifty farmers and their families and engage to make loans to such as have no means. Let each home be allotted twenty-five acres, five of which will be

rent free for family support, the rest to be cultivated on shares paying each settler half product. In less than eight years each settler will pay for his allotted portion and will have stocked it, at the same time increasing the value of contiguous farms 100 per cent.

"What in your judgment are its (the county's) needs and possibilities?"

CHARLES COUNTY.

We want small farms, honest labor and immigrants with means to purchase the waste lands. Immigrants from the North would suit better than foreigners. We can't understand why people will be content to freeze in Minnesota and be blown away in Dakota when every inducement is offered to them in a more congenial climate.

WICOMICO COUNTY.

More capital and a lower rate of interest, leading to employment of more labor of all kinds, especially that in trucking and allied branches, and loans on longer time, say six to eighteen months or two years, secured by ample mortgages on real and personal property.

BALTIMORE CITY.

A report setting forth the advantages and resources of the State of Maryland with a view to attracting immigration would be incomplete unless it contained some reference to Baltimore city. The reference here made will, however, like the matter treating of the State at large, be more descriptive than statistical, and will be as brief as it is possible to make it, in order to embrace the salient points. It is not extravagant to say that Baltimore's advancement along all the lines of progress has been greater during the last five years than in the ten preceeding years.

So strongly has the progressive spirit manifested itself that is impossible at this time to measure the vast changes that must take place within the next decade; but within that time it is commonly agreed that there will be so great a revolution in Baltimore's commercial standing that nothing but a memory of old methods and systems will be left.

This is a time when the great business centers are constantly kept at the highest tension, striving each to outreach the other in the contest for commercial supremacy. All of these have

some real or fancied advantage upon which to base their claims for recognition. Newport News and Norfolk are rivalling each other in their efforts to secure the trade of the Middle Atlantic Coast. New York boasts of its magnificent entrance and its great highways that lead to the North and to the East rivers. Portland is proud of its deep water and broad harbor; Boston, with its intricate passages and narrow inlets, speaks of its facilities as a seaport with as much pride as it does of its learning and literature, and San Francisco thinks that it holds the palm of superiority over its Eastern rivals. But nature's gifts to Baltimore, her superb harbor and the Chesapeake Bay, are in reality superior to all of these.

It is this close proximity to the Chesapeake Bay and the Atlantic Ocean which gives Baltimore a geographical position particularly desirable and makes it one of the most important ports along the Eastern coast. This, together with unsurpassed transportation facilities by rail and water, places Baltimore in direct connection with all parts of the world.

These exceptional advantages can hardly be said to have been fully utilized as yet, for the people of Baltimore are proverbially conservative. This conservatism, however, may not be considered an unmitigated evil, results having proven that a slow but steady progress is more to be desired than sporadic successes, to be followed by a train of failures and financial panics, from which this city has been particularly free.

In recent years great strides have been made in the direction of a permanent prosperity. Improvements are constantly going forward, rapid transit in street railroads which, a few years ago seemed very far off, is now an accomplished fact, and the day of the slow-traveling horse car is over. The desirability of Baltimore as a home is universally admitted. The rents are low, very much lower, in fact, than in any city of its importance in the country. The markets are first-class; an abundance of meats, fish, oysters, vegetables and fruits being always to be obtained at rates that come within the reach of nearly all.

One of the most distinctive points of advantage possessed by Baltimore is the prominence it has so long held as one of the leading markets in the United States for handling the products of agriculture. Only a few of the large Eastern cities can compare in wealth and volume of business with this city.

The location of the city, as the center of a belt of country remarkable for its fertility, makes it a market of the greatest availability for produce of every kind. The farmers of Western

Maryland join with the tobacco planters of Southern Maryland, and the truck farmers of the Eastern Shore and Virginia in sending the products of their labor to this city to be disposed of.

The productiveness of this extensive region, and the cultivation of diversified crops in the section contiguous and naturally tributary to this market, have made Baltimore the receiving and distributing point for farm and dairy products of every kind. The farms, dairies and orchards of Maryland, Virginia and Pennsylvania, which pay tribute to Baltimore, always find this a good market, besides a most desirable distributing point. Being the only city of importance below Mason and Dixon's line until the heart of Virginia is reached, it is in the very nature of things that this should be so.

There has been a very material increase in the grain trade here. Already there are six or seven large elevators which are kept going continually, receiving grain and distributing it to all parts of the world, and these are hardly sufficient. A great part of Baltimore's grain business used to go to Philadelphia and New York, but this port was thought to be a better place for shipment, considering the fact that other cargo could also be obtained, and the tide turned this way.

The flour trade of Baltimore is also an important industry. The leading mills are of large capacity and in their equipment combine every modern improvement for the manufacture of flour of a superior quality. Maryland wheat is peculiarly suited for the production of export flour, and of this grade the local output is very large, and by its sustained superiority of quality brings the highest prices in foreign countries. The export flour business of the city is by no means confined to the shipping of the home product, as many of the great mills of the Northwest are finding in Baltimore their most convenient shipping point for reaching the best foreign markets.

The fruit business is a branch of trade which occupies a prominent place in the aggregate of Baltimore's commerce. The transactions in foreign fruit are of steadily increasing volume, and great quantities are imported each year to this market.

Baltimore, in addition to being the center of a productive truck country, is situated in a place which, by its natural advantages, makes it one of the best fish and oyster markets in the world. Nearly the whole South draws its necessary supplies from Baltimore, and the city commands, besides the bulk of the wholesale trade south of Mason and Dixon's line, a large and increasing portion of the northern and eastern trade.

The city has also for a long time been recognized as a great center of productive industry, and for the last decade or more it has made rapid strides in this direction. The magnitude of her manufacturing interests is not fully appreciated even by her own people. New industries have sprung into existence daily, and many of the old concerns have increased their capacity and forces fourfold. There are only about two or three cities in the country that outrank Baltimore as a manufacturing center. The peculiar fitness of the city for manufacturing activities and her natural facilities for trade and transportation have been strongly demonstrated. The manufacturing and productive interests are very much diversified in character. It is estimated that seventy-five per cent. of all the cotton sail duck manufactured in the United States is produced within the limits of Baltimore, and that sixty per cent. of all the cotton duck produced in the world is produced within the State. This is a leading industry, and all parts of the country draw upon this city for that product, and it is also extensively shipped to foreign ports.

The manufacture of clothing is another enterprise which has shown marvelous growth. The facilities for producing in this line afforded by Baltimore enables the dealers to hold their own against the sharpest of competitors. There are about forty wholesale houses, with a capital of nearly $6,500,000. The annual sales amount to $15,000,000. The manufacture of shirts, underwear and overalls is a most active industry and never more so than for the past few years. The productions in this line are very great and constantly increasing.

Of all the industries, there are none that are more conducive to the general prosperity and wealth of a city than the diversified and extensive enterprises that utilize the different metals. Industries of this kind necessarily need large capital and bring to the city an unusual class of workmen, who make good citizens, thus building up the city in many different ways. Baltimore is singularly fortunate in many respects, and the products of her foundries and of her machine shops are known and recognized all over the United States. In the production of gas-pipe, gasometers, pipe-fittings, and other cast-iron supplies, there is an excellent and largely increasing business here, and those houses which have been making a specialty of this line have grown and expanded and are still growing. One of the metal industries, however, for which this city is famous is that of bell-casting. Some years ago the production of bells was largely confined to

Troy, N. Y., but now Baltimore has taken its place in that respect, and produces more bells than any city in the country.

The city is also well known all over the country as a great stove manufacturing center. The output of the foundries finds a ready sale throughout the South, and some special grades are sold as far West as California.

The volume of leather trade for the year 1892 was about the same as for 1891, and the aggregate sales amounted to $26,000,000. The building improvements were in due proportion to the growth of the city, and from July 1, 1891, to June 30, 1892, there were 1,775 permits for new buildings issued and 541 permits for improvements. The dry goods business shows a gratifying increase from year to year. The present capital is $13,000,000; sales from $34,000,000 to $35,000,000. Owing to the many improvements recently made in the machinery necessary to successfully carry on beer breweries, a great advance has been made in this line, and much of the beer made in this city is shipped to the North, South and West. The capital invested is $10,000,000, and the annual production 650,000 barrels. The furniture trade for the past year has been entirely satisfactory, and there are now fifteen large factories, besides many small ones, employing 2,500 mechanics and yielding a product of $3,000,000. Some of the largest manufacturers and wholesale dealers in lumber have offices in this city and bill all lumber from this point, making their shipments direct from their mills wherever situated. The receipts for local consumption exclusive of export trade are as follows: Shingles, 2,317,865; staves, hoops, headings, wood posts, etc., 7,499,200 feet; lumber and timber, 63,086,962 feet; lumber, 184,060 feet; total, 70,772,222 feet. Value of logs, lumber, etc., exported from Baltimore in 1891, $1,624,719. The manufacture and sale of pianos is another important feature of Baltimore's trade, the sales amounting to about $3,000,000 annually, nearly all of which represents sales of instruments of home manufacture. Baltimore stands near the top of all the cities manufacturing straw goods, and the business is steadily increasing. The capital invested is about $750,000, and the annual sales reach $2,250,000.

In the following table is given the statistics of manufactures in Baltimore for 1890 together with a comparison of the manufactures of 1880:

	1880.	1890.	Increase.
Number of establishments	170,000	202,000	35.22
Capital invested	$ 38,586,773	$ 82,526,344	104.63
Number of hands employed	58,338	83,091	40.39
Wages paid	$ 15,117,489	$ 35,377,538	121.83
Cost of materials	47,974,297	73,614,829	44.27
Value of products at factory	78,417,304	144,401,026	69.19

A gratifying increase is shown in each item, which tends to prove that a healthy and steady growth is taking place in the manufacturing industries of the city.

CEREALS, TOBACCO AND LIVE STOCK.

CEREAL PRODUCTION.

The following table shows the production of corn, wheat and oats in Maryland for ten years ending 1892. The acreage planted to corn shows a very constant increase up to 1892, when the acreage fell off greatly, and the production was the smallest of the ten years.

The production does not appear to bear any relation to the number of acres under cultivation; for although the acreage under cultivation in 1883 was smaller than in 1884, yet there was a greater yield in the former year than in the latter. This is also true of the other years. The amount received for the product shows as varied fluctuations.

The acreage planted in wheat shows a steady decrease during the past ten years, 1892 showing the smallest acreage for the whole period. The yield fluctuates greatly. The prices have also fallen, which accounts for the decrease in acreage. The acreage in oats, as will be seen by the table, increased steadily from 1883 to 1888, when a decrease begins, and the greatest decrease is shown in 1892. The greatest yield is shown in 1885, and the smallest in 1890. The prices received for oats appear to be generally uniform, ranging from thirty-three to thirty-eight cents a bushel.

Statement of Production of Principal Cereals in Maryland from 1883 to 1892, both inclusive.

CORN.

YEARS.	ACRES.	BUSHELS.	VALUE.
1883	691,542	16,251,200	$ 8,288,112
1884	698,400	15,237,000	7,313,760
1885	726,336	15,999,000	7,359,540
1886	719,073	15,039,000	6,466,770
1887	719,073	19,415,000	8,736,750
1888	740,645	17,553,000	7,898,850
1889	733,239	15,105,000	6,495.031
1890	725,907	16,333,000	8,166,454
1891	740,425	18,841,000	10,006,844
1892	629,361	12,965,000	5,834,177

WHEAT.

YEARS.	ACRES.	BUSHELS.	VALUE.
1883	626,200	7,577,000	$ 8,031,620
1884	644,980	8,260,000	6,855,800
1885	580,482	5,534,000	5,035,940
1886	586,287	7,194,000	5,899,080
1887	562,836	5,797,000	4,811,510
1888	557,208	7,634,000	7,634,000
1889	546,064	6,171,000	4,998,124
1890	535,143	6,208,000	5,711,046
1891	540,494	8,170,000	8,107,410
1892	529,684	6,992,000	5,173,953

OATS.

YEARS.	ACRES.	BUSHELS.	VALUE.
1883	100,323	2,023,800	$ 789,282
1884	110,000	1,980,000	693,000
1885	111,100	2,475,000	866,250
1886	113,322	2,470,000	815,100
1887	117,798	2,438,000	804,540
1888	118,976	2,296,000	757,680
1889	117,786	2,203,000	660,779
1890	113,075	1,357,000	597,036
1891	111,944	2,127,000	808,236
1892	96,272	1,829,000	695,084

MARYLAND TOBACCO.

The accompanying table shows the inspections of tobacco at Baltimore from 1825, the year the State Tobacco Warehouses were established, to 1892 inclusive. It will be seen that in 1825 the crop aggregated 15,294 hogsheads, and gradually increased up to 1846, when 41,027 hogsheads were produced. Then the production decreased for several years, the decrease running from 7,000 to 18,000 hogsheads. In 1856 the crop again commenced to increase, and in 1860, 51,247 hogsheads were produced, which was the greatest production ever made in the State. During the war the production greatly decreased owing to the abolition of slavery, so that the total yield in 1865 was but 25,479 hogsheads. Since that time the production of tobacco has been for the most part confined to Anne Arundel, Calvert, Prince George's, Charles and St. Mary's counties, though a small quantity has been grown in Frederick, Montgomery, Carroll and Howard counties.

It was 1878 before the crop regained anything like its full proportions, when it was 46,521 hogsheads. The amount of the crop varied greatly during the ensuing years until 1889 when, owing to the remarkably bad weather, it fell to 14,027 hogsheads, the lowest yield recorded.

Inspections of Maryland Tobacco at Baltimore since 1825.

Year.	Hogsheads.	Year.	Hogsheads.	Year.	Hogsheads.
1825	15,294	1848	23,009	1871	30,956
1826	17,086	1849	30,965	1872	33,595
1827	19,672	1850	27,085	1873	38,656
1828	14,178	1851	26,202	1874	27,754
1829	10,948	1852	29,569	1875	33,523
1830	15,233	1853	29,248	1876	42,111
1831	19,850	1854	26,048	1877	38,905
1832	20,974	1855	28,470	1878	46,521
1833	18,115	1856	38,330	1879	37,830
1834	19,222	1857	38,057	1880	36,871
1835	25,117	1858	45,140	1881	27,720
1836	28,109	1859	44,448	1882	35,891
1837	25,865	1860	51,247	1883	33,105
1838	19,666	1861	50,901	1884	35,149
1839	18,486	1862	41,102	1885	32,649
1840	31,213	1863	36,613	1886	41,081
1841	29,353	1864	28,589	1887	37,064
1842	33,439	1865	25,479	1888	32,174
1843	29,628	1866	32,260	1889	26,165
1844	32,181	1867	40,325	1890	14,027
1845	40,072	1868	25,000	1891	27,336
1846	41,027	1869	27,740	1892	22,433
1847	33,729	1870	25,696		

The crop raised in Maryland in 1891 amounted to about 19,000 hogsheads of Southern Maryland tobacco, 1,300 hogsheads Southern Maryland ground-leaves, and 1,000 hogsheads of Upper Country tobacco. The quality and texture were good, the color ripe, with a moderate proportion of bright and a slight proportion of houseburn. It contained the smallest percentage of common grades of any crop raised in Maryland since 1876.

These characteristics, added to the small yield, caused it to sell very promptly at prices that were above the average realized in many years, and which must be remunerative to the planter.

It is estimated that the 19,000 hogsheads of Southern Maryland tobacco sold at an average of 7½ cents a pound, the 1,300 hogsheads of ground-leaves at an average of 6 cents a pound, and the 1,000 hogsheads of Upper Country at an average of 8½

cents a pound, amounting in all to about $1,200,000, which has gone into the hands of the farmers from this crop for that year. For 1892, the crop was a little smaller than that of the previous year, 22,433 hogsheads. Of this quantity about one-half was planted early in May and came early to maturity—fortunately too early to suffer appreciably from the drought which prevailed after August 1. Cutting began as early as August 15, and all that part of the crop was safely housed early in September.

Curing weather was clear, but not as warm as was needed to produce bright color, so that while the tobacco is generally of good quality, the color is brown to reddish with little yellowish and absolutely free from houseburn.

The other half of the crop, planted after May 15th, mostly in the latter part of June, suffered greatly from drought up to the middle of September, at which time it was stunted and green; the rains of the latter part of September arrived in time to save it, causing a very rapid growth, but the early approach of frost forced farmers to hurry it into the barn in an unripe state, and the subsequent weather being harsh and cool, it cured rough and either green or very dark in color.

The outlook for 1893 is that good tobacco will continue to command satisfactory prices, while even the very common may bring fair prices, since low grades are again very scarce in the Western tobacco crop.

The quantity of the Maryland crop has of late years steadily decreased, as will be seen from the table. The satisfactory prices of the two preceding years, however, led farmers to prepare last year for a larger crop; but neither the young plants nor the season contributed to the furtherance of their efforts. It now seems probable that this year an earnest effort will again be made to increase the crop, and if this is accompanied by intelligent, careful cultivation and handling, there is no reason why the increase should not become permanent. Experience has shown that the consumptive demand for Maryland tobacco can absorb 30,000 or 35,000 hogsheads if of average quality and containing all grades from the lowest to the best, and it is to be hoped that in the near future a return to former quantities can be realized.

The yield of tobacco per acre ranges from 600 to 800 pounds, according to the soil, the average being about 700 pounds. At an average price of seven and one-half cents, this produces to the farmer $52.50 gross per acre, and although the cost of making a crop of tobacco is more than that of any other crop, being about five cents a pound, there is no other crop raised in Southern

Maryland which can net the farmer as much as tobacco at present prices.

The prominent characteristics of Maryland tobacco are its mild, sweet flavor and free burning character, rendering it specially adapted for pipe smoking, and it is principally consumed in Holland, France and Germany.

Baltimore is almost exclusively the market for the tobacco crop of Eastern Ohio, which, beginning with receipts of 2,300 hogsheads in 1828, has since then found its best outlet here. The size of the crop has fluctuated greatly, reaching the maximum of 28,862 hogsheads in 1846; but of late years, owing to lessened demand, and consequently low prices, the yield has heavily decreased, and in 1891 was only 5,459 hogsheads. It is like Maryland tobacco, principally consumed abroad for pipe smoking, France alone, last year, taking 3,000 hogsheads, or more than one-half the crop.

The decreased production of both Maryland and Ohio tobacco is the natural result of the immense extension within the past twenty-five years of the tobacco producing area. Previous to the introduction of the Burley tobacco in the west, Maryland, Ohio and Virginia were the only producers of light grades suitable for the pipe; but since 1873 the culture of Burley has from small beginnings rapidly increased, until to-day the annual yield is 100,000 to 125,000 hogsheads. This tobacco being light in character, and generally lower in price than the corresponding grades of Maryland and Ohio, has been to some extent substituted for them; but it has neither the sweetness nor the burning capacity of Maryland tobacco and can never take its place for smoking purposes.

Considerable quantities of Virginia, North Carolina and Western tobacco, as also Virginia and Western stems, are bought in their respective markets by Baltimore firms and shipped abroad from Baltimore, and the three factories for smoking tobacco and snuff which are situated here purchase still greater quantities of these growths; but as none of them are inspected in our warehouses, and few sold here, there are no statistics of the volume or extent of this branch of the trade.

A large business is also done in American seed leaf tobacco and in Havana and Sumatra tobacco, our manufacturers of cigars and cheroots purchasing a considerable portion of their supplies in this market.

LIVE STOCK.

The following figures show the estimated number of live stock on farms in Maryland for 1891 and 1892 with average price and value:

For 1891—Horses, 126,394; average price, $80.14; value, $10,129,235. Mules, 13,623; average price, $104.56; value, $1,424,457. Milch cows, 143,244; average price, $25; value, $3,581,100. Oxen and other cattle, 124,788; average price, $20.15; value, $2,514,164. Sheep, 156,838; average price, $3.67; value, $575,752. Hogs, 346,510; average price, $5.14; value, $1,781,930.

For 1892—Horses, 131,450; average price, $79.81; value, $10,490,907. Mules, 13,487; average price, $105.52; value, $1,423,097. Milch cows, 147,541; average price, $26.21; value, $3,867,050. Oxen and other cattle, 121,044; average price, $21.79; value, $2,637,328. Sheep, 164,680; average price, $3.91; value, $644,558. Hogs, 349,975; average price, $6; value, $2,098,449.

The appended table shows the receipts of cattle, sheep and hogs at Baltimore from 1885 to 1891, both inclusive:

Year.	Cattle.	Sheep.	Hogs.
1885	90,870	178,712	265,381
1886	96,357	219,645	323,643
1887	85,166	227,456	504,619
1888	170,113	438,910	613,959
1889	205,479	421,951	702,966
1890	219,009	381,025	837,167
1891	183,385	422,131	908,079

TAXATION AND ASSESSMENT.

The growing probability that at the next session of the General Assembly some legislation will be enacted looking toward a radical departure from the methods of taxation now in operation in this State, and the agitation already commenced, more than a year before any action can be taken, invests with more than ordinary interest a question which is at all times nearer the hearts of the people than any other.

There is nothing within the domain of public thought about which people are more sensitive than this question of taxation, nothing which they regard with more jealous eye, nor which more quickly breeds discontent and revolt when proper safeguards are not thrown around it. There is no relation of the State to the citizen more difficult of adjustment, no obligation of the citizen to the State easier to evade. It is of all governmental functions probably the most complex; none is fuller of niceties and perplexities, and in no other does the law-maker find it more difficult to reconcile conflicting interests.

People are, in the payment of taxes, just as they are in the other relations of life, honest and dishonest, and in the one as in the other, the former must suffer for the laches of the latter. Legislation can no more wholly obviate this condition of affairs than it can make all people honest and law-abiding, and so to minimize existing evils is all that the most ardent reformer can hope for. The commonly-accepted theory has long been that taxes are the compensation which property pays to the State for protection; "that they are a portion given by each citizen of his property in order to secure and enjoy the remainder," and for which he receives in return the manifold advantages which come from a well regulated government. That taxes are paid for protection is now conceded to be true only in part. It is certainly true that a man cannot claim the right to be excused from the payment of taxes because he has not received protection. Nor can he ask to be relieved of the payment of taxes on the ground that he does not need protection.

The Massachusetts Tax Commission evidently furnishes the defi-

nition which must be conceded to be most nearly correct. "A man is taxed," says the very able report of this commission, "not to pay the State for its expense in protecting him, and not in any respect as a recompense to the State for any service in his behalf, but because his original relations to society require it. It is wise and right for any individual to contribute of his wealth what the true interests of society require, and this he does not as a payment for the gifts which society has conferred." In any event, their payment is an obligation which the citizen should willingly assume when they are laid equitably and with a view solely to the greatest good for the greatest number. The contract is mutual and is no more to be avoided by the one party than it is by the other. It should need no argument to convince the unprejudiced mind that the State ought not to tax property beyond its territory nor assess one of its citizens for that property which cannot be reached or protected by its laws. Personal property, when taxed, should be taxed only where it is located, and where it can only be reached by the assessor or by an attachment. The taxpayer has accustomed himself to regard taxes as burdensome and oppressive; but they are only made so in reality by improper legislation or the lack of legislation, for the security that he receives for his property is far in excess of the amount which he pays for that security.

The strong feeling in the popular mind that there should be a general reassessment of property once in every ten years is certainly based on the conviction that within a decade the fluctuations in property values are of sufficient magnitude to warrant a readjustment and an equalization. It can hardly be questioned that this is the case in much shorter periods of time, but instead of ten years, it has been sixteen since the last State assessment, and even if any action be taken by the Legislature of 1894, it must certainly be eighteen years, nearly twice the time in which an assessment is supposed to be necessary, possibly longer, before the new machinery is put into operation. No one claims, or at least few people do, that a reassessment has not been necessary for a great many years. The only bone of contention is as to the methods to be adopted. There has been a pronounced change in public sentiment within recent years upon this point. Maryland is not solitary in the agitation of this question. From one end of the country to the other it is engaging alike the attention of the press, and the politician, the business man and the wage-earner, the student and the farmer, until now like the great cry for better roads and the wail over agricultu-

ral depression there comes from every section and from all classes a demand for some definite action. It is a question vast in its importance. The advanced school of thought is vigorously urging its methods of taxation upon the public. The theory which has obtained so long, that in order to tax equitably it is necessary to attempt to tax everything, and which it may be said, is not a plant of American growth, is being abandoned by the countries from which we adopted it, and it is clear, must sooner or later be abandoned by our own. That theory maintains that for the purpose of securing exact justice and equality all property of the taxpayer, real and personal, tangible and intangible, visible and invisible, must of necessity be subjected to one uniform rate of valuation and assessment. If the Legislature which passes such a law as this could at the same time construct assessors of a different calibre from those who are usually selected to carry its mandates into effect, one, at least, of the chief difficulties of such a theory would be removed. But by the usual methods of selection and appointment, not only is the tax-assessor hopelessly incapable of dealing with the problems which confront him at every turn, but he must be possessed of more than average wisdom, however capable he may be, to place the proper valuation on the property he is called upon to assess. Under such a system uniformity and equality, among the chief things to be desired, are impossible. It is a common thing to find two pieces of property side by side, and of the same character, assessed at a rate and in a manner about as wide apart as it is possible to make them. The rates are fixed either entirely at the whim of the assessor, or in accordance with the local usage that has obtained. In one instance property is assessed at its full value and in another at not more than one-tenth. Often no attempt even is made to comply with the law. As a result of all this the greatest injustice is done and a wholly incorrect view of the values of properties is given.

That system of taxation which is most easily collected, and at the smallest expense, that bears most equally upon all classes in the State, that will have the least tendency to discourage production, and the burden of which cannot be easily shifted, will be universally admitted to be the best system that can possibly be adopted. To ascertain what that system is, requires much consideration, and that all persons having views to express should receive a respectful hearing goes without saying. Any mere hurling of epithets by opposing factions can have no other result than to bring into the question the discussion of personalities which should have no place in an inquiry

that has for its purpose the ascertaining of a system of taxation which may survive its makers, and perhaps prove a boon to coming generations.

For centuries efforts have been made to levy, accurately and fairly to all concerned, a tax upon personal property. In ancient times we read of the penalties prescribed for an undervaluation of this species of property. The tax-gatherers were provided, not with our more civilized weapons of oaths and penalties, but with power to bring "tax dodgers" before inquisitors to be beaten, burned, and in many cases crucified, with the view to ascertaining "their actual worth." Ancient history tells us that these means proved ineffectual for the purpose, and modern history as plainly tells us that our more humane methods are equally vain. This is not to say that no taxes upon personal property can be collected. On the contrary, large amounts have been collected, but the difficulty lies in the fact that so much of it is wrung from those least able to pay it. One of the most persistent and honest classes in this and other States that call out loudly for a stringent tax of this character is the farmer. He feels that in some way the "city sharper" is getting the best of him, and it is very evident that there is something wrong in his case. His work is of the most exacting and onerous kind, requiring the labor not only of himself, but in many instances of all the members of his family, both male and female, and yet he finds his mortgage indebtedness at the end of the year no nearer liquidation than it was at the beginning. He has no small reason for complaint. But look calmly on the results of the personal property tax. Of what does the personalty of the farmer consist? His cattle, horses, sheep, hogs, the product in his barn, farm implements and machinery, and such other things as can be easily seen and as easily appraised. He cannot hope to escape taxation on these things, for their value is so easily ascertainable as to prevent the mere possibility of such a thing as escaping assessment.

On the other hand, go into the house of the man of wealth, and even though all assessors were farmers, some of whom might retain their hatred of the wealthy man, not one assessor in ten thousand could determine accurately the value of the personal property therein. He may find two paintings hanging on the wall, one, it may be, twice as large as the other. His first impulse would be to place the higher valuation upon the larger one, when it might just as likely as not turn out that the smaller picture was ten times as valuable. The furniture, bric-a-brac and articles of virtu, which to

the man of art are priceless, would seem to the unsophisticated assessor as but mere baubles and unworthy of appraisement. As a result these articles escape all taxation, notwithstanding a conscientious assessor may do his duty as best he can. It is obvious to the most careless student of the question, that under such circumstances a tax upon personal property must of necessity fall more heavily on the poor man than on the rich.

The remedy offered for this state of affairs is the administering of oaths to the owners of such property by which it is hoped that a truer return will thus be made. The remedy has been tried in other States, and what is the result? An appalling increase in the number of perjurers. In New York, for instance, a number of years ago, in a report of the assessors, it was stated that "less than fifteen per cent. of the personal property of the State, liable to taxation, finds a place on the rolls of the assessor," and an instance is cited in one town where an auction sale of cattle took place, the proceeds amounting to $360,000 going to one resident; yet the whole assessment of personal property in that town amounted to $28,500, "a sum very much less than that obtained for a few cows." The assessor also said at the same time that "a large percentage of all the personal property assessed is found entered on the rolls to women, minor heirs, lunatics, who cannot watch with the eagle eye of business men, or to trustees and guardians." Two widows in the village of Batavia were assessed for more personal property than all the individuals in the neighboring city of Rochester with a population of nearly one hundred thousand. This condition of affairs is not unique in New York State, for Ohio assessors say that the most honest returns of property are always made by the poorer classes, and the most inadequate returns by millionaires; while widows, who have no experience in business, and trustees who represent widows and orphans, are taxed upon every dollar they own. California furnishes another example of the same thing. In 1879 a new constitution was adopted almost entirely by the votes of farmers, the bankers and capitalists voting solidly against it. Under the new arrangement bonds, money and credits are taxable and holders of stock in corporations are avowedly and intentionally subject to double taxation, first, upon the corporate property, and again upon the capital stock. This law was certainly thought to be the acme of perfection in its line, and it was believed that all personal property would surely be reached. But the result is ludicrous. In four-fifths of the State, according to the returns, the sheep produce

no wool; fifty counties have many bee-hives, but in only four is honey produced; personal property is rapidly diminishing in San Francisco, and two-thirds of the money on hand before the adoption of the new constitution appears to have been sent out of the State.

The following table is an instructive object lesson and is well worth reproducing here:

1880.	Land.	Improvements.	Personal property.	Money.	Total.
San Francisco	$122,030,000	$42,969,000	$68,584,000	$19,747,000	$253,330,000
Remainder of the State....	227,127,000	68,568,000	81,072,000	4,931,000	381,698,000
Total.....	349,157,000	111,537,000	149,656,000	24,678,000	635,028,000
1886.					
San Francisco	$120,375,000	$55,034,000	$48,705,000	$6,188,000	$230,302,000
Remainder of the State....	340,274,000	100,775,000	94,022,000	2,887,000	537,953,000
Total.....	460,649,000	155,809,000	142,727,000	9,075,000	768,255,000

It will be seen from this table that while improvements in San Francisco increased in six years about one-third, personal property, other than money, fell off nearly one-third, while money fell off more than two-thirds. In the rest of the State, which is mainly agricultural, improvements increased nearly one-half; personal property, other than money, increased nearly one-sixth, while money fell off about forty per cent. among the farmers. The result was to make the farmers pay sixteen and two-thirds per cent. more tax than before, and San Francisco paid twenty-five per cent. less.

These typical cases show the difficulties of securing anything like an approximation to justice in the assessment and collection of a tax upon personal property, and if this Bureau had the time and means at hand just as ludicrous a condition, doubtless, could be shown in our own State.

As an illustration of how the present system works in Maryland, the following question propounded by the tax commission of 1881 to the Appeal Tax Court of Baltimore is given: "To what extent do you succeed in reaching investments made by residents of this State in private securities of any kind?" The answer was: "We utterly fail in reaching private securities of every description. Here

and there only have they been returned by some conscientious holder." The city collector was asked by the same commission: "Does your experience enable you to suggest any effective way of collecting taxes on personal property?" He replied: "The collection of taxes on personal property is attended with so many and such insurmountable difficulties that I am at a loss what suggestion to make looking to a more effective collection." When such high authorities as are quoted see no way in which this class of property can be reached, we may well consider the advisability of abandoning the attempt.

Those who assert that a tax on personalty can be collected despite the experience of our own and other States, suggest that evasions of the tax be punished by imprisonment. Such a proposition as this is unworthy of a moment's consideration, unless it be to ridicule it. As well talk about going back to the law of imprisonment for debt. Its advocates are not aware, or do not seem to remember, that the Senate bill of 1892 contained just such a provision, and that it was met by a storm of opposition which plainly showed the temper of the General Assembly. And even though such a provision was inserted in a bill of this kind, it would prove nugatory, as it would never receive the approval of the people, and any law which fails to get such approval is bound to be ineffectual.

Personal property everywhere escapes the proportion of taxes which it should pay, and, worst of all, it is given the minimum assessment in the very places where it is most desirable and necessary that it should bear its just share of the burden. However painstaking and vigilant the assessor may be, the intangible personal property will escape his closest scrutiny, and this leads to another, and one of the worst features of all, dishonesty on the part of the property holder for which this system is responsible; for the taxpayer, as is too well known, is quick to convert his property temporarily into a form that cannot by any possibility be reached. State comptrollers and assessors are loud in their complaints that the assessment of personalty is nothing but an incentive to perjury. The Tax Commission of New Hampshire declares that "the mere failure to enforce the tax is of no importance, in itself, considered in comparison with the mischief wrought in the corrupting and demoralizing influences of such legislation." The Illinois Commission asserts that the system is "debauching to the conscience and subversive of the public morals—a school of perjury, promoted by law." The Connecticut Commission maintains that the result-

ing "demoralization of the public conscience is an evil of the greatest magnitude." The West Virginia Commission says that "the payment of tax on personalty is almost as voluntary, considered very much in the same light as donations to the neighborhood church or Sunday school." The New York Assessors' Report of 1879 says: "The general property tax is a reproach to the State, an outrage upon the people, a disgrace to the civilization of the nineteenth century, and worthy only of an age of mental and moral darkness and degradation, when the 'only equal rights were those of the equal robber.'"

An increased rate of taxation upon a decreased valuation of property is regressive taxation. The man who pays the taxes on realty is, practically, he upon whom personal taxes are also levied. The man is not taxed at all who owns no real estate; the man who does own real estate pays the taxes for both. The result is that the farmer is the man upon whom the weight of taxation rests, for the country assessor adds his visible and tangible personal property to his real property and makes him pay taxes on both. And right here is the chief explanation, if not the whole explanation, of the falling off of the values of farming lands. The farmer is literally "bowed down with a weight of woe." He bears not only his own share, but is made the scape-goat for others, and with this "old man of the sea" still mounted on his long-suffering shoulders, there is small wonder that he has at last made up his mind to shake him off if he can. But how will he do it? The farmer is under a mistaken impression in believing that any tax which may be placed upon intangible personal property, held by what he calls the "tax dodgers" in Baltimore city, will relieve him, except to an almost inappreciable extent, of the burden which he bears. All that could be accomplished for him in the way of relief in this direction would be to decrease his State tax, and the State tax is so small a portion of what he has to pay, that even if it were reduced by one-half or obliterated entirely it would not make much difference. Baltimore city and the counties are without mutual interest, except as to the general prosperity of both and in desiring each to see the other with such a system of taxation as would best promote their interests; but they are certainly totally without pecuniary interests as to the payment of local taxes It is the county tax which is the great burden the farmer has to bear. The county tax rates, which often exceed one hundred cents on one hundred dollars, are created by the county authorities. Often these high rates are unavoidable because of heavy expenses in the way

of improvements and otherwise; but oftener, they are wholly avoidable, or should be. Let the farmer begin his work of reform at home; let him lop off the diseased limbs that poison the healthy growth, and dig up the noxious weeds that have flourished so long at the expense of his legitimate products. Such an administration of his county government as would bring the local tax-rate within his ability to pay, would quickly change his condition, and almost certainly wholly remove the chief cause of his complaint. The proportion of intangible personal property held in the counties is very small in comparison with that held in Baltimore city; hence the small benefit that he would reap from such a tax.

Objection is made that if the tax on personal property results in inequalities, its abolition, and the consequent concentration of all taxation on real estate, would present the same difficulty; for if a man owns personal property and no real estate, it is claimed he would escape all taxation. The single taxer answers this objection in what appears to be such a conclusive manner that it is reproduced briefly. The rent or price of land must be paid in personal property of some form, whether it is the product of that particular piece of land or not. Consequently a tax upon land is, in its turn, paid out of personal property, which is received for rent. As rent will, by a natural law, absorb a due proportion of all personal property, resting upon land, so taxation, if laid proportionately to rent, will take an equal and just proportion of all personal property. The rent, or, which is the same thing, the price of land is the reflection of the whole value of personal property upon the whole tract of land which is available for the deposit of the property. Where you find one hundred acres upon which there is only one thousand dollars' worth of personal property, the rent of these acres is insignificant. But where you find, as you easily can, one acre within a large city, upon which there is constantly kept several million dollars' worth of personal property, the rent is enormous. Of course vacant lots in the heart of a city are as valuable as lots which are built upon, although immense amounts of personal property are in the buildings and none upon the vacant lots. But that is simply because the owner of the vacant lots could, if he choose, have just as much personal property upon his land as his neighbor has, who has built a large warehouse. The value of land may, therefore, be stated to vary in proportion to the readiness and willingness of the owners of the personal property to make use of that land as a place of deposit. In short, the owner of real estate will pay the personal property tax

when he pays his realty tax, and a certain portion of it is in turn collected by him from the person using the real estate. So the attempt to tax personal property tends to divide the taxation, and thus to collect one-half from real property and one-half from personalty. Certainly the attempt to collect the latter half has been signally unsuccessful.

One of the greatest difficulties met with in all States in their attempts to adjust a fair system of taxation has been the diversity of interests of various parts of the State. These differences appear to be irreconcilable, and as a way out of the difficulty a proposition is now earnestly advocated to give each locality Home Rule in the matter of taxation—that is to say, each county and the city of Baltimore will be expected to subscribe its proportionate share of the expenses of the whole State, but each locality shall also have the right to determine upon just what classes of property its own citizens shall be taxed for local purposes. This seems so fair and equitable that all sides concede this to be a step towards the solution of a vexed problem. As I have said, the tax most hard to bear at present is not the State tax, but the various local taxes imposed by the several counties and the city of Baltimore. The reason these taxes appear burdensome is on account of the fact that counties widely separated, with diverse interests and resources, determine for each other upon what species of property taxes shall be levied. It is not to be expected that the representatives of Garrett county can have anything in common with the interests of St. Mary's, or that Baltimore city's representatives can look out for the best interests of Wicomico. The result is that there is continual complaint on the part of one section about the supposed shortcomings of the other. All this could be remedied at once by the adoption of a system of Home Rule in taxation. Then if Baltimore city considered it advisable to modify the tax on personal property, or even to exempt it altogether, and the agricultural communities to make no change, each community could do as it thought best in the matter. If one section desired to tax mortgages and another to exempt them; if it was considered desirable to tax improvements to land in one county and exempt them in another, all of these things could be accomplished without any friction and without so much complaint as is now heard.

This system has many things to commend it to popular approval, the first of which is, that it is thoroughly in consonance with our form of government. Local self-government is a principle that has

long been contended for—in fact, since the formation of the Republic. The system of local self-government wherever carried to its fullest extent has proved beneficial to the whole number of citizens concerned and causes a stimulation of interest in the affairs of the locality which cannot but result in the general welfare. Many of the abuses now complained of may be largely attributed to the carelessness or indifference of the great body of the people to public affairs, and any movement which will tend to bring about a more general interest in these matters is deserving of encouragement.

While the movement in favor of this reform was started in Baltimore city, it appeals with no less force to each county in the State. In certain counties cotton mills abound. Why should such counties be prevented from exempting these mills which give employment to so many of their people? An increase in building operations is nearly always welcomed. Why should not a county have the right to exempt buildings from taxation if it is so desired? On the other hand, certain kinds of property are now exempt by legislative enactment which it might in some localities be desired to tax, and if certain counties desired to reach these properties by taxation for local purposes, why should they not have the right to do so?

In some States it is proposed that the revenue for State purposes should be derived wholly from sources apart from the assessment of either real or personal property in the ordinary sense. A large part of it is obtained in that way already, and the system can be readily extended. The great corporations which have been granted valuable public franchises could with ease be made to bear the whole burden of State taxes by the imposition of a franchise tax, more especially if the tax on personal property were removed. This plan, if thought to be desirable in Maryland, would remove the State tax of seventeen and three-quarter cents entirely. If the corporations and their property and business are taxed, this capital is making its contribution to the public revenues and does not escape because the holders of the stock and bonds are not taxed upon it again.

The next General Assembly may be asked to pass such a measure, though some doubt has been expressed as to whether that body has the right under the State constitution to exempt any property. If it should be determined that the Legislature has no jurisdiction in the matter, it is likely that an amendment to the constitution will be submitted to the people on the subject. Such an amendment was voted upon at the election of 1891, but was defeated. This amendment proposed to Article 15, of the Declaration of Rights, required that taxes be uniform upon the same kinds of property or class of sub-

jects. It did not provide that the same taxes shall be levied upon all kinds of property and every class of subjects. It also defined and limited the power of the Legislature with reference to exemptions, confining exemptions, however, to religious, charitable, educational, benevolent and other such institutions. It proposed to prohibit special exemptions and authorized the Legislature, in its discretion, to levy an income tax.

It is impossible to contemplate the situation in Maryland without a full realization of the looseness of our system of taxation. It wholly fails to accomplish the ends most desired. In fact, it is not a system at all worthy of the name. Apart from the gross inequalities which it permits, almost insurmountable difficulties are presented in the collection of statistics, so that they may be formulated with that uniformity which it is most important and desirable they should be. Under existing conditions there is no way of distinguishing between real and personal property, as no separate record is kept in the counties, and the same books have been continuously in use for the past seventeen years, or since the last assessment. It is also impossible to get at any manufacturing enterprises in the counties by means of the county records, unless they are incorporated, as otherwise no specific record is kept of them.

The figures presented in this report must certainly be in the nature of a revelation, it is probably safe to say, to a large majority of the people of this State. This is so because the people have not been students of this question; they are only just becoming so. That they have not been heretofore is partly because of their indifference and partly because the means have been inaccessible to them. Certainly under such a condition of affairs none but beneficial results can come from agitation. In no other way is a solution of this most vital question so likely to be reached. There has been practically no discussion of the principles of taxation; there cannot be too much of it. The constantly changing conditions in the economic world make it impossible that modern civilization can live and prosper under the antiquated statutes of past generations. The world moves and we must keep pace with it or be lost in the struggle. Old laws and methods must conform to modern conditions; not modern conditions to old theories.

Maryland's population is not proportionate to her unsurpassed geographical position, her productive soil, her climate and her intelligence. There is no other way in which those things that are most needful for the increased prosperity of our State can be secured than by an equitable system of taxation.

The tables presented contain interesting and instructive material as showing various features of interest in connection with taxation in Maryland.

Table No. 1 shows the taxable basis of the State by counties for a period of seventeen years, covering the entire time in which there has been no general assessment, and including 1876, the year in which the last assessment was made. It is here proper to state that the assessed value of the property of Maryland corporations, other than the real estate situated in this State, is not included in the figures given in the tables published in the successive reports of the Comptroller of the State Treasury under the heading, "Assessed value of Property for State Levy." In other words, the Comptroller's reports do not show the true taxable basis of the State.

To get at the real basis upon which the State taxes are levied and collected, it is necessary to add to the figures given in the Comptroller's reports the net value of the shares of stock of Maryland corporations, as that net value is ascertained by the State Tax Commissioner, by deducting from the gross assessed value of the shares of stock, the assessed value of the real property in the State, the amounts of credits allowed for investments paying taxes and mortgages held by homestead and building associations. This table is made up by adding to the Comptroller's figures the figures in the Tax Commissioner's report for the net assessed value of shares of stock, and by also adding in the case of Baltimore city the assessed value of manufacturing plant exempt from taxation. For the years of 1889 and 1890 there is added for Baltimore city and Annex $19,999,735 and $21,620,068, respectively. These figures differ from the sum of those contained in the Comptroller's and Tax Commissioner's reports by the amount of the assessment of the property of individuals and of real property of corporations in the Annex to Baltimore city, amounting to $19,999,735 in 1889 and $21,620,068 in 1890, which seem in some way to be omitted in the Comptroller's tables for those years. The figures given in the table are not quite the same upon which the county and municipal levies are made. For purposes of taxation the net assessed value of the shares of stock of corporations are credited to the county or city in which the "owner bona fide resides the greater part of the year." In Baltimore city and some other places in the State manufacturing plant is exempt from municipal taxation, though it is always subject to State taxation.

Though the last assessment was made in 1876, the results were of course not available until 1877, and the figures for that year are

used generally as a basis of comparison. Nevertheless, a comparison of 1877 with 1876 is of interest. As a result of the assessment a decrease in the taxable basis is shown in Calvert, Caroline, Carroll, Harford, Kent, Queen Anne's, Washington and Worcester Counties. Washington county shows the largest decrease, $3,396,456, and Queen Anne's the next largest, $1,727,423. Calvert shows the smallest decrease, $17,629. The net result in the state as shown by the assessment was an increase of $49,355,610.

In 1878 the taxable basis of the State fell off $14,042,238, and there was also a falling off in Baltimore city that year of $10,419,846. In 1879 it went up to $504,074,377, an increase of $39,648,587. In that year also there was an increase in the taxable basis of Baltimore city of $25,374,124, and in Allegany of $7,294,667. Baltimore city's basis in 1880 fell off $15,042,880, and the State basis $12,876,793, showing that the counties either gained, or held their own. For the other years no material variation is shown, there being a steady increase in the taxable basis of the State each year. The most noticeable change is in regard to Baltimore city and county for the years 1888 and 1889, the increase in Baltimore city and the decrease in Baltimore county being the result of the annexation of the Belt. The largest increase in the taxable basis of the State for any year of the period covered by the tables was in 1877, $49,355,610. The years showing the next largest increase are 1879, $39,648,587; 1885, $13,136,727; 1892, $11,742,864.

The figures in the table for the years 1876, 1877 and 1878 show only the assessed value of real and personal property, without the shares of stock and the plant exemptions. The shares of stock of corporations are added in for the first time in 1879, the office of State Tax Commissioner having only been created the year before. The manner of getting at the shares of stock of corporations prior to that time seems to be shrouded in so much uncertainty that it is a hopeless task to undertake to show any figures that would be even approaching accuracy. The law exempting plant from city taxes was passed by the General Assembly in 1880, and these exemptions, being subject to State taxes, are added in for the first time in 1882. There is a substantial increase shown in the city of Baltimore and in all the counties except Dorchester, Garrett, Prince George's, St. Mary's and Worcester, in 1879, the first year that the Tax Commissioner got to work, while a perceptible decrease the next year indicates that the "tax dodger" must have been abroad in the land even at that time.

TABLE No. 1—*Showing the taxable basis by Counties from 1876 to 1892 inclusive.*

COUNTIES.	1876.	1877.	1878.	1879.	1880.	1881.
Allegany	$ 8,493,114	$ 10,809,342	$ 10,644,042	$ 17,938,709	$ 17,380,992	$ 18,012,932
Anne Arundel	9,706,600	9,870,117	10,037,008	10,266,567	10,079,288	9,945,497
Baltimore City	203,148,761	243,132,007	232,712,161	258,086,285	243,043,405	246,054,137
Baltimore	41,571,777	50,501,160	49,121,170	53,148,233	56,366,943	55,584,950
Calvert	2,131,188	2,113,559	2,070,466	2,098,954	2,092,249	2,150,608
Caroline	4,147,638	3,757,157	3,795,639	3,825,379	3,969,781	3,928,576
Carroll	16,416,331	16,167,511	15,670,144	16,271,781	16,249,523	16,061,974
Cecil	13,149,691	13,198,535	12,882,258	13,527,763	13,422,392	14,271,107
Charles	3,135,062	3,452,501	3,301,935	3,450,026	3,442,315	3,454,434
Dorchester	5,927,168	6,029,790	6,042,593	6,019,237	5,852,820	5,827,911
Frederick	24,607,105	25,462,716	24,519,831	25,170,311	24,919,756	24,584,310
Garrett	3,183,229	3,336,359	3,599,108	3,355,336	3,348,400	3,463,205
Harford	11,788,331	11,506,902	11,488,421	11,851,775	11,769,887	11,874,224
Howard	6,550,782	7,526,408	7,485,225	7,513,823	7,608,124	7,528,314
Kent	7,774,999	7,448,301	7,391,910	7,440,429	7,422,045	7,415,966
Montgomery	7,688,424	8,272,571	7,954,743	7,983,517	7,952,893	8,056,580
Prince George's	8,265,983	9,073,363	9,090,574	9,075,555	9,092,525	8,990,420
Queen Anne's	8,312,806	6,585,383	6,587,119	6,833,767	6,910,848	6,985,804
St. Mary's	2,794,663	2,918,698	2,871,602	2,843,887	2,825,252	2,788,389
Somerset	3,620,245	3,939,349	3,892,427	3,898,035	3,838,162	3,791,206
Talbot	7,601,924	8,107,149	8,090,189	8,760,583	8,735,864	8,746,652
Washington	19,996,187	16,599,731	16,596,878	17,047,977	17,222,104	17,246,005
Wicomico	4,434,722	4,479,301	4,437,979	3,589,032	3,588,348	3,554,326
Worcester	4,664,988	4,180,118	4,142,368	4,078,416	4,063,668	4,093,225
TOTALS	$ 429,112,418	$ 478,468,028	$ 464,425,790	$ 504,074,377	$ 491,197,584	$ 494,410,851

TABLE No. 1—*Continued.*

COUNTIES.	1882.	1883.	1884.	1885.	1886.	1887.
Allegany	$ 17,296,786	$ 17,246,183	$ 16,781,699	$ 16,531,325	$ 16,261,851	$ 16,548,410
Anne Arundel	10,098,471	9,994,279	9,873,145	9,968,834	9,882,984	10,115,438
Baltimore City	245,255,661	250,248,215	249,840,702	253,357,993	264,867,476	264,808,412
Baltimore	57,772,774	56,086,501	57,785,849	58,207,757	59,235,281	60,910,259
Calvert	2,093,727	2,122,858	2,188,784	2,142,294	2,121,426	2,112,611
Caroline	3,991,891	4,054,235	4,107,193	4,137,990	4,155,982	4,232,121
Carroll	16,093,135	16,171,268	16,193,037	16,505,967	16,527,599	16,826,665
Cecil	13,468,553	13,487,914	13,583,853	13,582,481	13,487,385	13,578,093
Charles	3,501,588	3,509,313	3,543,493	3,543,299	3,421,216	3,373,444
Dorchester	5,860,470	5,956,369	6,189,181	6,351,593	6,379,515	6,374,950
Frederick	24,500,765	24,411,909	24,471,336	24,331,530	24,399,990	24,615,316
Garrett	3,421,004	3,681,725	3,643,711	3,790,360	3,806,972	3,829,445
Harford	11,848,878	11,931,077	12,354,722	12,284,470	12,467,128	12,396,339
Howard	7,678,219	7,754,222	7,680,806	7,436,303	7,609,770	7,576,639
Kent	7,491,552	7,544,340	7,629,479	7,630,076	7,718,169	7,772,101
Montgomery	8,120,948	8,181,636	8,363,249	8,523,156	8,536,695	8,769,848
Prince George's	8,972,322	8,846,192	8,928,882	8,953,392	9,012,459	8,978,115
Queen Anne's	7,062,778	7,105,029	7,230,747	7,404,149	7,462,202	7,478,597
St. Mary's	2,848,562	2,756,204	2,807,982	2,792,520	2,789,412	2,780,785
Somerset	3,816,358	3,961,761	4,079,388	4,116,327	4,147,653	4,160,622
Talbot	8,735,744	8,720,643	8,892,223	8,970,379	9,013,212	8,973,068
Washington	17,368,425	17,378,976	17,331,770	17,598,360	17,837,583	17,804,468
Wicomico	3,628,788	3,636,834	3,721,541	3,802,286	3,815,642	3,789,930
Worcester	4,234,573	4,151,664	4,320,121	4,267,927	4,409,893	4,306,690
TOTALS	$ 495,161,972	$ 498,939,347	$ 501,542,393	$ 506,230,768	$ 519,367,495	$ 521,112,366

TABLE No. 1—*Concluded.*

COUNTIES.	1888.	1889.	1890	1891.	1892.
Allegany	$ 16,428,616	$ 17,139,313	$ 17,041,984	$ 17,448,733	$ 17,992,688
Anne Arundel	10,603,882	10,236,819	11,340,993	11,066,263	11,225,206
Baltimore City	267,925,674	292,872,696	297,013,897	303,897,745	308,781,994
Baltimore	60,906,183	43,280,477	44,235,075	44,355,774	47,253,432
Calvert	2,133,676	2,102,551	2,088,079	2,072,327	2,070,443
Caroline	4,233,566	4,362,787	4,410,323	4,428,016	4,396,405
Carroll	16,824,924	16,979,349	16,692,476	16,699,417	16,692,634
Cecil	13,514,564	13,652,563	13,737,343	13,996,125	14,255,963
Charles	3,539,858	3,438,942	3,382,177	3,369,161	3,462,937
Dorchester	6,326,904	6,317,554	6,362,925	6,340,977	6,359,877
Frederick	24,534,569	23,765,073	24,150,321	24,116,307	24,697,369
Garrett	3,821,061	4,130,973	4,110,724	4,191,038	4,330,745
Harford	12,500,847	12,613,555	12,621,159	12,592,889	12,969,194
Howard	7,453,470	7,712,610	7,739,136	7,686,918	7,787,400
Kent	7,790,151	7,822,558	7,933,086	7,903,710	7,935,093
Montgomery	8,812,244	9,074,727	9,496,837	10,192,209	10,710,507
Prince George's	8,922,067	8,922,105	8,967,271	9,152,581	9,291,083
Queen Anne's	7,456,917	7,541,549	7,526,486	7,584,602	7,900,996
St. Mary's	2,835,362	2,850,579	2,835,273	2,835,301	2,723,338
Somerset	4,176,853	4,162,713	4,218,348	4,122,735	4,226,650
Talbot	9,537,040	9,266,042	9,181,479	9,090,868	9,148,848
Washington	17,995,015	18,027,946	18,059,534	18,051,942	18,397,999
Wicomico	4,065,840	4,132,580	4,126,758	4,153,311	4,340,374
Worcester	4,427,938	4,461,566	4,527,388	4,550,164	4,690,802
TOTALS	$526,767,221	$534,870,628	$541,899,072	$549,899,113	$561,641,977

Table No. 2 shows the increase or decrease and percentage of increase or decrease for 1892 as compared with 1891. It will be seen that four counties, Calvert, Caroline, Carroll and St. Mary's, show a decrease, the last with a decrease of $111,963 or 2.9 per cent., being the largest, and Carroll the smallest, with a decrease of .04 per cent. Calvert, though falling off but $1,884, shows a decrease of .1 per cent.

The largest relative increase, 6.6 per cent., is shown in Baltimore county, though, of course, Baltimore city shows the greatest actual increase in dollars, but only a relative increase of 1.6 per cent. Montgomery county is next on the list, showing an increase of $518,298, or 5.1 per cent., followed closely by Wicomico, with an increase of 4.5 per cent., and Queen Anne's with an increase of 4.2 per cent. The smallest increase is shown in Dorchester of $18,900 or .03 per cent. Kent comes next with an increase of $31,383 or .04 per cent. From the totals it will be seen that the aggregate of the four counties named was $152,241, while there was an increase in the rest of the State of $11,895,105, or a net increase of $11,742,864 or 2.3 per cent.

TABLE NO. 2—*Showing by counties the increase or decrease and percentage of increase or decrease for 1892 as compared with 1891.*

COUNTIES.	INCREASE.	DECREASE.	PER CENT. OF INCREASE.	PER CENT. OF DECREASE.
Allegany	$ 543,955	.....	3.1	.....
Anne Arundel	158,943	.....	1.4	.....
Baltimore City	4,884,249	.....	1.6	.....
Baltimore	2,897,658	.....	6.6	.....
Calvert	....	1,884	.....	.1
Caroline	.....	31,611	.....	.7
Carroll	.....	6,783	.....	.04
Cecil	259,838	.....	1.8	.....
Charles	93,776	.....	2.8	.....
Dorchester	18,900	.....	.03	.....
Frederick	581,062	.....	2.4	.....
Garrett	139,707	.....	3.3	.....
Harford	376,305	.....	2.9	.....
Howard	100,482	.....	1.3	.....
Kent	31,383	.....	.04	.....
Montgomery	518,298	.....	5.1	.....
Prince George's	138,502	.....	1.5	.....
Queen Anne's	316,394	.....	4.2	.....
St. Mary's	.....	111,963	.....	2.9
Somerset	103,915	.....	2.5	.....
Talbot	57,980	.....	.6	.....
Washington	346,057	.....	1.9	.....
Wicomico	187,063	.....	4.5	.....
Worcester	140.638	.....	3.1	.....
TOTAL	$ 11,895,105	$ 152,241	.....	.....
Net increase	$ 11,742,864	.....	2.3	

Table No. 3 shows the increase or decrease and percentage of increase or decrease for 1892 as compared with 1877. During this period five counties, Baltimore, Calvert, Frederick, St. Mary's and Wicomico, show a decrease. It will again be seen that St. Mary's county shows the largest decrease, a falling off of $195,360 or 6.7 per cent. being shown by the table. Baltimore county comes next, with a decrease of $3,247,728 or 4.5 per cent. The smallest decrease is shown in Calvert, where it was but $33,116 or 1.6 per cent. In the case of Baltimore county the decrease is accounted for by the fact that it was during this period that the Belt was taken from the taxable basis of that county and added to Baltimore city. In fact, this table is only given to show the changes that have taken place in these two years without attempting to account for them, for during such a long period many special causes may have arisen which it would be impossible at this late day to take into consideration.

The largest increase is shown in Allegany county, being $7,183,346 or 66.5 per cent., while in Baltimore city, with an increase of $65,649,987, there is yet but an increase of 27 per cent. Garrett county, with an increase of $994,386 or 29.8 per cent., shows the second largest increase, with Montgomery county and Baltimore city following closely, with an increase of 27.1 per cent. and 27 per cent. respectively. The smallest increase is shown in Charles county, which is $10,436 or .3 per cent., with Prince George's and Carroll following, with an increase of 2.4 and 2.6 per cent. respectively. The total decrease is $4,380,478 and the total increase is $87,554,427. The net increase shown by the totals of $83,173,948, or 17.2 per cent. is hardly commensurate with what might be expected for such a long period of years.

TABLE NO. 3—*Showing by counties the increase or decrease and percentage of increase or decrease for 1892 as compared with 1877.*

COUNTIES.	INCREASE.	DECREASE.	PER CENT. OF INCREASE.	PER CENT. OF DECREASE.
Allegany	$ 7,183,346		66.5	
Anne Arundel	1,355,089		13.7	
Baltimore City	65,649,987		27.0	
Baltimore		$ 3,247,728		4.5
Calvert		33,116		1.6
Caroline	639,248		17.0	
Carroll	525,123		2.6	
Cecil	1,057,428		8.0	
Charles	10,436		.3	
Dorchester	330,087		5.5	
Carried forward				

TABLE No. 3——*Continued.*

COUNTIES.	INCREASE.	DECREASE	PER CENT. OF INCREASE.	PER CENT. OF DECREASE.
Brought forward.				
Frederick	.....	765,347	.....	3.0
Garrett.	994,386	.....	29.8	.....
Harford.....	1,462,292	.....	12.7	.....
Howard.....	250,992	.....	3.3	.....
Kent	486,792	.....	6.5	.....
Montgomery.....	2,437,936	.....	27.1	.....
Prince George's.....	217,720	.....	2.4	.....
Queen Anne's.....	1,315,613	.....	20.0	.....
St. Mary's	.....	195,360	.....	6.7
Somerset.....	287,301	.....	7.3	.....
Talbot.....	1,041,699	.....	12.8	.....
Washington	1,798,268	.....	10.8	.....
Wicomico.....	.....	138,927	.....	3.0
Worcester	510,684	.....	12.2	.....
TOTAL	$87,554,427	$4,380,478	.....	.....
NET INCREASE.....	83,173,949	.....	17.2	.....

Table No. 4 shows by counties the aggregate and per capita assessed value of property, the per capita State and county taxes, and the population. Although the State and county bases are not exactly the same, the difference is so inappreciable, and so difficult to get at, that for the purpose of this calculation they are assumed to be the same. At any rate, a separation would show no material variation in estimating the per capita county taxes, and the figures given are near enough for all practical purposes.

It will be seen that Baltimore city and Baltimore county lead, with an assessed value per capita of $710.53 and $648.11 respectively. The next two counties are Cecil and Carroll with an assessed value of $551.46 and $515.58 respectively; yet they fall far short of Frederick, Allegany and Washington in point of population. This shows that, relatively, Cecil and Carroll are, save Baltimore county, the richest in the State. Somerset county, it will be seen, with an assessed value of property of $4,226,650 and a population of 24,155, shows a per capita assessed value of but $174.98, the smallest in the State. St. Mary's county is but slightly above Somerset, with an assessed value per capita of $178.16.

The amount of local taxes paid per capita shows as great variations as is shown in the payment of the purely State tax. Baltimore city and Baltimore county again lead, with $11.01 and $4.54 per capita respectively, with Cecil, Harford and Kent next in the order named. The lowest amount of county tax per capita is shown by Somerset county, which pays but $1.57. Worcester is the next

lowest with $1.75, and St. Mary's county shows $1.78 per capita, while Wicomico shows $1.80. Nothing can prove more clearly than this table that it is not the State tax, but the county tax which is so difficult to meet. For example, Baltimore county pays a total tax per capita of $5.65, yet $4.54 is for county taxes, while but $1.11 is for State purposes. In Baltimore city it is still more apparent, for though the city pays $12.27 per capita, yet $11.01 of it is for local purposes. Garrett pays a total tax per capita of $3.80, yet but 54 cents is for State purposes, the balance, $3.26, being the amount paid per capita into the county treasury. Somerset shows the same state of affairs, for $1.78 per capita is paid for local purposes, and but 31 cents is paid into the State treasury. So it will be found in each county that the State tax is infinitesimal, while that levied for local purposes swells the amount charged to each taxpayer to a very large sum—in many cases so large as to be almost unbearable.

TABLE No. 4—*Showing by counties the assessed value of property for State tax, the population, assessed value per capita, and the amount of State and county taxes paid per capita in the State of Maryland for 1892.*

COUNTIES.	Assessed value of property for State tax.	Population.	Assessed value per capita.	Amount of State tax paid per capita at 17¾c. on the $100.	County tax rate.	Amount of county taxes paid per capita.	Total amount of State and county taxes paid per capita.
Allegany	$ 17,992,688	41,571	$430.89	$ .76	$ .91¼	$3.93	$4.69
Anne Arundel	11,225,206	34,094	329.24	.58	.98	3.23	3.81
Baltimore City	308,781,994	434,439	710.53	1.26	1.55	11.01	12.27
Baltimore	47,253,432	72,909	648.11	1.11	.70	4.54	5.65
Calvert	2,070,443	9,860	209.98	.37	1.10	2.31	2.68
Caroline	4,396,405	13,903	332.04	.58	.92¼	3.07	3.65
Carroll	16,692,634	32,376	515.58	.91	.50	2.58	3.49
Cecil	14,255,963	25,851	551.46	.95	.82	4.52	5.47
Charles	3,462,937	15,191	227.95	.39	.95	2.17	3.46
Dorchester	6,359,877	24,843	256.00	.45	.95¼	2.44	2.89
Frederick	24,697,369	49,512	498.20	.88	.62	3.09	3.97
Garrett	4,330,745	14,213	304.70	.54	1.07	3.26	3.80
Harford	12,969,194	28,993	433.52	.78	1.03	4.47	5.25
Howard	7,787,400	16,269	478.59	.84	.71	3.40	4.24
Kent	7,935,093	17,471	454.18	.80	.97	4.41	5.21
Montgomery	10,710,507	27,185	393.94	.69	.90¼	3.56	4.25
Prince George's	9,291,083	26,080	356.25	.63	.80	2.85	3.48
Queen Anne's	7,900,996	18,461	428.36	.76	.89	3.81	4.57
St. Mary's	2,723,338	15,819	178.16	.31	1.00	1.78	2.09
Somerset	4,226,650	24,155	174.98	.31	.90	1.57	1.88
Talbot	9,148,848	19,736	463.56	.82	.78	3.63	4.45
Washington	18,397,999	39,782	462.47	.82	.78	3.64	4.46
Wicomico	4,340,374	19,930	217.77	.38	.82¾	1.80	2.18
Worcester	4,690,802	19,747	233.36	.41	.75	1.75	2.16
Total	$561,641,977	1,042,390					

Table No. 5 shows the tax rate in each county and Baltimore city for ten years from 1883 to 1892 inclusive. One of the most noticeable features of this table is the fact that, in Carroll county, with the exception of 1883, when the rate was 49 cents, the uniform rate of 50 cents on the $100 has been maintained. This is, by the way, the lowest rate in any county during all these years, with the single exception of Baltimore county, where, in the year 1889, it was 36 cents. The highest tax rate, of course, is found in Baltimore city, which at present is $1.55, or five cents more than it was in 1883, the year in which the rate was lowest during this period. The highest rate in Baltimore city was during the years 1888 and 1889, when it was $1.90, while in 1890 it was 1.85. The county having the highest tax rate is Calvert, where the people are required to pay $1.10 on each $100. Garrett, Harford and St. Mary's counties follow Calvert with a tax rate of $1.07, $1.03 and $1, respectively. It seems not a little singular that while a property owner in Carroll county escapes with a tax rate of 50 cents on the hundred dollars, yet, if he was to locate across the border, in Frederick county, he would be obliged to pay 62 cents, and if he moved to Baltimore county his rate would be 70 cents, while if he went to Howard he would have to submit to the rate of 71 cents. These differences have existed during the whole period covered by this table, varying but little from 1892.

The rate shown for the years preceding 1892 present much food for reflection. For example, we find that in Garrett county the tax rate was but 89 cents in 1883, yet the following year the rate jumped to $1.40; in the two years following a decided decrease is shown, and again in 1887 it was increased. Since that year, until 1892, a decrease is shown, but in the last-named year the rate was increased to $1.07. The other counties show as strange variations of the tax rate. These may be, in part, but not wholly accounted for, by local conditions, such as extraordinary public expenditures as the result of unusual public improvements. At any rate they show a wide and a fruitful field for the tax reformer, and must go far towards convincing him that it is not here alone he must seek the root of the evil.

TABLE No. 5—*Showing the rate of county taxes of the State of Maryland for ten years, from 1883 to 1892 inclusive.*

COUNTIES.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Allegany	.67¼	.85¼	.84¼	.81¼	.81¼	.82¼	.81¼	.93¾	.87¼	.91¼
Anne Arundel	.98	.89	.88	1.07	1.00	1.14	.89	1.09	.81	.98
Baltimore City	1.50	1.60	1.60	1.70	1.60	1.90	1.90	1.85	1.55	1.55
Baltimore	.60	.60	.60	.67	.60	.61	.36	.63	.54	.70
Calvert	1.01¾	.83½	.90 10/12	1.21 5/6	.84⅓	.86 3/20	.87⅜	.92	.91	1.10
Caroline	.81¼	.91¼	.81¼	.91¼	.91¼	.97¼	.92¼	.92¼	.92¼	.92¼
Carroll	.49	.50	.50	.50	.50	.50	.50	.50	.50	.50
Cecil	.60	.90	.75	.80	.80	1.00	.67¼	.70	.63	.82
Charles	.94	.98	1.00	1.04	.87	.93	.92	.93	.88	.95
Dorchester	.86¼	.86¼	.86¼	.86¼	.86¼	.92¼	.85¼	.92¼	.92¼	.95¼
Frederick	.65	.68	.65	.65	.58	.65	.70	.62	.62	.62
Garrett	.89	1.40	1.12½	1.03	1.17	1.10	1.08	.98	.98	1.07
Harford	.75	.74	.80	1.00	.74	.82	.75	.87	.83	1.03
Howard	.65	.62	.61	.65	.61	.62	.60	.76	.70	.71
Kent	.84	.94	.88	.90	.86	.91	.88	.88	.82	.97
Montgomery	.86¼	.86¼	.86¼	.86¼	.89¼	.92¼	.92¼	.91¼	.90¼	.90¼
Prince George's	.77	.77	.80	.74	.78	.90	.95	1.00	.80	.80
Queen Anne's	.91¼	.92	1.00½	.98¼	.90	.87	.91	.92	.93	.89
St. Mary's	1.01	.89	1.07	.98	.97	1.00	.97	.93	.90	1.00
Somerset	.86¼	.89¼	1.02¼	.79¼	.86¼	.98¼	.92	1.20	.95	.90
Talbot	.62½	.65	.65	.73	.70	.73	.73	.83	.83	.78
Washington	.88	.88	.87	.87	.74	.75	.86	.78	.78	.78
Wicomico	.76	.86	.81¼	.81¼	.83⅓	.81¼	.97½	.77	.75¼	.82¾
Worcester	.69½	.66⅔	.68¼	.72	.77	.90	.80	.90	.78	.75

Table No. 6 shows the number of inhabitants, under the present system, represented by a member of the General Assembly, including members of both the Senate and House of Delegates. This result is obtained by dividing the population by the representation in the Legislature. The third column of the table shows the assessed value of property in each county and the city of Baltimore in proportion to the representation in the Legislature. For example, Allegany county has five members of the House of Delegates and one Senator. So, if we divide the total assessed value of property, which is $17,992,688, by six, the representation in the Legislature, we find $2,998,781 to be the amount of property which each member represents. This plan has been followed in each of the counties, and the result is as shown in the third column. .

TABLE NO. 6—*Showing by counties the number of members of the General Assembly, number of inhabitants to a member of the General Assembly, and the assessed value of property to a member of the General Assembly.*

COUNTIES.	Number of members of General Assembly, Senators and Delegates.	Number of inhabitants to a member of General Assembly.	Assessed value of property to a member of the General Assembly.
Allegany	6	6,929	$ 2,998,781
Anne Arundel	5	6,819	2,245,041
Baltimore city	21	20,688	14,703,904
Baltimore	7	10,416	6,750,490
Calvert	3	3,287	690,148
Caroline	3	4,634	1,465,468
Carroll	5	6,475	3,338,527
Cecil	4	6,463	3,751,491
Charles	3	5,064	1,154,312
Dorchester	4	6,211	1,589,969
Frederick	6	8,252	4,116,228
Garrett	3	4,738	1,443,582
Harford	5	5,799	2,593,839
Howard	3	5,423	2,595,800
Kent	3	5,824	2,645,031
Montgomery	4	6,796	2,677,627
Prince George's	4	6,520	2,322,771
Queen Anne's	4	4,615	1,975,249
St. Mary's	3	5,273	907,779
Somerset	4	6,039	1,056,662
Talbot	4	4,934	2,287,212
Washington	5	7,956	3,679,600
Wicomico	4	4,983	1,085,094
Worcester	4	4,934	1,172,700
STATE	117	8,909	4,800,359

While the comment upon the inequalities in the collection of taxes under our present system has been very general, there has been little attention given to the distribution of the fund after it has been collected. It is, therefore, of great interest to show just what sum is paid by each county and the city of Baltimore on account of the public school tax and what amount each county and the city of Baltimore receives in return for use in their own schools. In addition to these expenditures must be added the amounts paid each county and the city of Baltimore on account of the free school fund and the academic fund. In the accompanying table these several disbursements are combined for convenience, so that the totals may be seen at a glance:

TABLE No. 7—*Showing by counties the receipts and disbursements on account of public school tax, including academic and free school funds, for 1892.*

CITY AND COUNTIES.	Receipts on account of public school tax to September 30, 1892.	Disbursements on account of public school tax, academic fund and free school fund.
Baltimore city	$272,228.59	* $179,942.05
Allegany	16,263.28	22,490.43
Anne Arundel	9,360.27	25,703.60
Baltimore	40,067.55	44,697.59
Calvert	2,046.29	11,330.82
Caroline	3,470.14	11,951.22
Carroll	16,761.56	25,149.47
Cecil	13,567.13	17,161.89
Charles	2,986.26	20,738.36
Dorchester	6,122.18	19,483.60
Frederick	13,096.42	30,947.89
Garrett	3,136.99	13,232.28
Harford	10,995.73	20,117.15
Howard	8,895.69	13,021.01
Kent	7,946.24	19,377.58
Montgomery	2,621.87	21,743.79
Prince George's	2,133.26	23,760.93
Queen Anne's	8,410.77	16,128.28
Saint Mary's	2,125.58	18,136.86
Somerset	2,767.22	19,547.27
Talbot	9,134.21	16.141.69
Washington	12,791.23	22,319.86
Wicomico	4,325.49	13,748.99
Worcester	2,770.11	16,380.80

*This includes $2,000 expended on account of the Baltimore Manual Labor School.

It will be seen from this table that every county receives a much larger amount in payment of its school expenses

than it pays into the State treasury. On the contrary, Baltimore city pays $92,286.51 more than it receives for the support of its local schools. In Prince George's county $23,760.93 was expended, while but $2,133.26 was collected from the county for the purpose. Montgomery county receives $21,743.79, and pays but $2,621.87, an excess of $19,121.92. Charles county pays $2,986.26 and receives $20,738.36, or $17,752.10 more than it expends. So it will be found in the whole list, each county receiving more than it pays out. Thus it is self-evident that not only does Baltimore city pay a very large percentage of the expenses of the education of the children in every county in the State, but that the counties are every one ahead in the calculation, for the amount they receive is so much greater than that they pay out, that it nullifies entirely their State tax, and still leaves a large balance in their favor. Here are certainly inequalities that require the gravest consideration. They force the conclusion that this question of taxation is not a one-sided but a many-sided question; a question to be approached calmly, intelligently, dispassionately, as one in which all the people are seriously interested; in which they all have rights that are bound to be respected, and for which they should all labor to bring about but one result—that which will be the fairest for all interests.

TABLE No. 8—*Showing the amounts received by various institutions from the State and from Baltimore City.*

NAME OF INSTITUTION.	Amount received from State.	Amount received from Baltimore.
Asylum for Feeble Minded	$10,000.00	.....
Boys' Home	2,000.00	$ 3,000.00
Baltimore City Hospital	5,000.00	.....
Childrens' Country Home, (Baltimore county)	1,000.00	.....
Co-operative Workers	1,000.00	.....
Deaf and Dumb Asylum, (Frederick)	25,000.00	498.20
Deaf, Dumb and Blind Asylum	7,000.00	.....
Female House of Refuge	3,750.00	4,000.00
Knapp's Institute	1,200.00	.....
German Orphan Asylum	1,500.00	.....
German Aged People's Home	1,500.00	.....
Hebrew Orphan Asylum	1,500.00	.....
Hebrew Hospital and Asylum Association	1,500.00	.....
Home of the Friendless	3,000.00	2,100.00
Home of Incurables	1,500.00	.....
House of Correction	25,840.00	.....
House of Good Shepherd	3,000.00	.....
House of Refuge	15,000.00	19,998.12

TABLE No. 8—*Continued.*

NAME OF INSTITUTION.	Amount received from State.	Amount received from Baltimore.
Manual Training School, House of Refuge	.....	2,000.00
House of Reformation, (Colored)	10,000.00	12,000.00
Hospital for Women of Maryland	2,000.00	.....
Home of the Friendless, (Diocese of Easton)	500.00	.....
Industrial Home for Colored Girls	3,000.00	2,500.00
Indigent Blind	16,482.98	.....
Lying-in Hospital for Indigent women, (Baltimore)	3,750.00	.....
Little Sisters of the Poor	1,000.00	.....
Ladies Confederate Memorial and Aid Society	1,000.00	.....
Lunacy Commission	2,215.96	.....
Lying-in Hospital Maternité, (Maryland)	2,500.00	.....
Maryland Hospital for the Insane	21,500.00	23,882.16
Maryland Institute	6,000.00	6,075.00
Maryland General Hospital	3,750.00	7,605.00
Maryland Penitentiary	50,000.00	.....
Maryland Line Confederate Soldiers Home	5,000.00	.....
Nursery and Child's Hospital	2,500.00	3,708.30
State Normal School, (White)	10,500.00	.....
" " " (Colored)	2,000.00	.....
State Board of Education, (expenses)	990.35	.....
State Normal School, (White)—Insurance	513.00	.....
St. Mary's Industrial School	15,000.00	20,000.00
St. Vincent's Infant Asylum	5,000.00	5,000.00
St. John's College	13,199.99	.....
St. Mary's Orphan Asylum	5,000.00	8,170.00
University of Maryland, (Baltimore Infirmary)	3,750.00	8,619.87
Women's Medical College	1,500.00	.....

Table No. 9 shows the total amount paid by each county and the city of Baltimore, so far as can be shown, into the State treasury. These amounts include the receipts from the clerks of the various courts, the registers of wills, the returns from the tax collectors of each county and the city of Baltimore, the receipts on account of auctioneers' licenses, receipts from the Register of Baltimore city, from the tax on incorporated institutions, and the returns from the sheriffs of each county, so far as any return is shown. This table does not include many other sources of revenue which the State has, for it was found that many amounts are received by the State which can be neither credited to the city of Baltimore nor to any of the counties. These amounts are excluded because it is impossible to separate

them so as to show each county's share. The table is, however, the closest approximation that can be given.

TABLE No. 9—*Showing the amounts paid in taxes into the State Treasury by the Counties and Baltimore City.*

COUNTIES.	AMOUNT PAID.
Allegany	$ 58,915.61
Anne Arundel	24,842.72
Baltimore city	1,005,100.71
Baltimore	102,635.06
Calvert	5,180.82
Caroline	8,554.02
Carroll	43,312.87
Cecil	29,757.49
Charles	8,319.51
Dorchester	17,739.08
Frederick	57,265.86
Garrett	8,967.02
Harford	43,634.71
Howard	17,831.48
Kent	18,580.24
Montgomery	11,978.78
Prince George's	9,548.61
Queen Anne's	19,092.15
St. Mary's	9,550,88
Somerset	6,622.80
Talbot	21,347.77
Washington	44,681.41
Wicomico	11,942.85
Worcester	9,413.11

THE OYSTER INDUSTRY.

It is a difficult matter to say anything in regard to the oyster interests of Maryland that is not almost like threshing over old straw. After years of discussion as to what action it is proper and within the power of the State to take in regard both to the natural beds and the barren bottoms, as the unproductive portions of the bay are commonly called, it cannot really be said that we are any nearer a solution. And so the question after all presents itself as one that has been not inaptly spoken of as a wrangle between two factions representing opposing interests. Whatever the ultimate solution of the difficulties surrounding an equitable adjustment may be, it is evident that it is not to be reached immediately nor without even more bitterness of feeling and discussion between the friends and opponents of the leasing system, for it is for or against this proposition that the State must ultimately and finally take its stand.

Certainly the State has few, if any, more important matters to grapple with than this, and the time has come when there is nothing to be gained by delay, because the issue has been plainly enough made up. Without doubt the preponderance of public opinion is that the oyster beds are fast being depleted under the laws which have up to this time been in operation; though this is as vehemently denied by one class as it is positively asserted by the other. While both these classes are undoubtedly made up of persons who are interested either politically or personally, there are those without any object in view except the good of the whole State, who are conversant with the subject in all its details, and who know every oyster bed and bar in the bay and its tributaries, whose testimony, unhesitatingly given, is that the beds are being depleted.

If the present system is to be maintained some of the most careful thinkers upon this subject are in favor of dividing the bay into two sections and prohibiting the catching of oysters in one section for a stated period, say one or two years, and confining the catch entirely to the other section during that time. At the end of the time designated the catching of oysters would be resumed in the first section and prohibited in the other. A rest of

two years, if it were certain that the beds would be unmolested for that length of time, would undoubtedly be a great benefit, and would give an impetus to the oyster industry which it has not known for many years. It is urged that in the present condition of the beds the supply from a division of the bay would be insufficient for the public needs, but even if this be true, the rejoinder is made that it would be better to have a shortage for one or two years in order that there might be a permanent rehabilitation of the beds.

The force of the argument seems clearly with those who are in favor of leasing the unproductive bottoms. Indeed it is difficult to see how anything else than good can result from such a system. Unless all statistics upon this subject are utterly incredible, which it is hardly to be supposed is the case, it has worked well wherever it has been tried.

It has been shown that ninety-five per cent. of all the oysters produced in European waters are the product of private industry upon artificial beds. In Connecticut, where oyster culture has been in operation for fifty years, the investigations made by Mr. Samuel M. Hotchkiss, Chief of the Connecticut Bureau of Statistics, and by Mr. J. W. Collins, for the United States Fish Commission, agree that the productiveness of the artificial beds is far greater than that of the natural beds. The yield per acre from the cultivated grounds is $34.60, while for the natural beds it is $1.62 an acre. In Accomac county, Va., where oyster cultivation has also been tried with great success, the difference is even more pronounced, the proportion being as $198 to $7 in favor of private culture. Rhode Island has received in the ten years ending 1891 $74,924.75 as estimated net revenue from her oyster grounds. Maryland in about the same period has lost $136,806.26, which is the excess of expenditures over income from the oyster fund. Rhode Island presents this result from an area one-tenth as large as that of Maryland. The natural oyster beds of Maryland cover 200,000 acres, from which the annual product is 10,000,000 of bushels. The unproductive bottoms, which are suitable for oyster culture, cover, it is supposed, 400,000 acres. A yield from these bottoms, proportionate to that of the natural beds, would give 20,000,000 of bushels more, or 30,000,000 in all. Assuming that the leasing of such a vast extent of territory would be impracticable, even impossible, for a long time to come, and assuming that the estimates here given are very large, it would at any rate be within bounds to say that the present yield could

be doubled under a proper management. Could such a system be carried into operation, it is easy to see that a magnificent revenue would accrue to the State, and that consequent benefits would ensue in many ways. If it were certain that the natural beds were gaining instead of losing, this would not seem a sufficient argument against the leasing of the unproductive bottoms, for it is clear to demonstration that the supply so greatly increased would carry this most important and delightful article of food to thousands of people at prices within their means who now never see an oyster, besides opening the way for employment in all the various ramifications of the trade to thousands of people.

It is not denied that any radical departure from the present system would work hardships to many whose financial interests are closely bound up in the present system; but if we hesitate to pass laws for the general good because they may work injury to comparatively few, it would be almost an effective bar to progress of all kinds. The tariff discussion furnishes an apt illustration of this.

The chief reasons assigned by those who oppose the leasing system are four in number: First, that it would result in a great depreciation in the value of the boats and other fishing property of those now engaged in the catch; that the grounds would inevitably pass into the hands of syndicates and corporations; that the owners and lessees of the grounds would be wholly unable to give them the necessary protection, and that consequently the State must be subjected to this expense; and lastly, that the unproductive bottoms are in large part necessary for the sustenance of the oysters on the natural beds. All who have followed the discussion upon this question are familiar with the answers which have been made to all of these propositions, except, so far as I am aware, the last. It is without doubt true that the oysters on the natural beds are fed by the matter that washes over them from the unproductive bottoms, and that they should have sufficient territory from which to feed is as necessary to them as is an abundance of pasturage to the live stock on a man's farm. It needs no argument to meet this objection, for no one supposes that even under the most intensive system of oyster farming the entire bottom of the Chesapeake Bay is going to be covered with oysters, or that the time will come when the oyster population will become so dense that it will bring about starvation.

The arguments urged in favor of leasing the beds are, first, a largely increased revenue to the State, thereby diminishing, if

not eliminating, some of the present forms of taxation; the cheapening of the oyster as a food supply; the giving of employment to a large number of people, and a general prosperity resulting from all of these. There is no step contemplated, so far as I am aware, looking toward any change as to the natural beds and bars. These are to receive at all times the best protection with which the State can surround them for the benefit of those who now enjoy their use. The unproductive bottoms being now of no use to any one, may it not well be asked then, why they should not be made to serve a better purpose than they now do, and to yield up the almost untold wealth to those who are willing to devote their means and labor to that end? While this would be for their own immediate benefit, it is true, it would be none the less for the common good. Those who are opposed to leasing these beds can by no possibility use or develop them themselves. May it not then be said of them that while they cannot, they do not wish anybody else to get the benefits?

The most recent efforts at legislation on the subject in this State culminated in the last Legislature in two bills, one known as the Culling Bill, and the other as the Eastern Bay Bill. The former passed, and, as at present in operation, has without doubt had a very beneficial effect. The cull law provides for the appointment of eight inspectors, at a salary of $600 for a season, to see that the provisions of the law are carried out, and they are assigned as follows: One to Baltimore city, one to Anne Arundel county, one to Oxford, one to St. Michael's, one to Crisfield, one to Cambridge, one to Wicomico county, and one for Somerset county outside the Crisfield district, and whenever the occasion arises the Governor is empowered to appoint such additional inspectors as may to him appear to be necessary. The law also provides for a tax of ten cents per hundred bushels of oysters purchased by each packer, shipper and wholesale and retail dealer, and the revenue thus raised is to be used in defraying the expenses incident to the enforcement of the law.

The receipts from this special oyster fund received at the comptroller's office have not been sufficient to pay the first month's salary of the oyster inspectors appointed, as provided by this act. A buyer of oysters from Queen Anne's county sent ten cents to the comptroller's office a short time since to pay his percentage for ten bushels of oysters purchased during the month of October. His actual indebtedness to the State for this purchase was one cent, and the nine cents was returned to him at a cost of two cents to the State. This is the smallest contribution ever

made to the oyster fund. It will be made very much more effective by a concurrent cull law between Maryland and Virginia. But it is not wholly from such legislation as this that the relief sought is to be obtained.

The Eastern Bay Bill was the first step looking toward a system of oyster culture in Maryland. It contemplated setting aside all the State land below the Eastern Bay for oyster farming, except the natural rocks and beds. The land was to be leased for one dollar an acre, rental to the State. The leases were to be for a term of twenty years, and no one person was to be permitted to take more than one hundred acres. Owners of land bordering on Eastern Bay were to have the first right of selection, and, subject to this right, persons actually engaged in catching oysters for a livelihood had the exclusive privilege of selection for a period of ninety days after the act was to be passed. A shell fish commissioner was also to be appointed with a salary of $2,500, to be paid out of the fees of his office. The bill was defeated, but by a small majority. It has been urged in opposition to it that the term of the leases was too long and the proposed acreage too large.

There is a very intelligent sentiment in favor of short leases, say not exceeding five years, and limiting the number of acres leased to each person. While admitting that the tendency would be toward a consolidation of holdings, yet the claim is that the small acreage plan is preferable to no limit whatever. Five years, it is claimed, is a sufficient time, for during that period investors could gain large returns. The lessees would be obliged, it is true, to wait until the third year before they could secure the first crop suitable for the market, yet they could get three crops before their lease expired, and the State would then be in a better condition to determine at what price the lease could be renewed. This plan, its advocates claim, would insure the nearest approximation to justice to the people of the whole State, as it would reduce the cost of oysters, a natural result of competition, and would also furnish a revenue to the State which would result in a corresponding reduction of the present taxation.

Whatever action may be taken to bring about a change in the present methods of handling this question must surely be taken by the interior or non-oyster-producing counties, for the people of the tidewater counties are unalterably opposed to the proposed change, and under existing conditions it would be an impossibility for any man to be elected to the Legislature who favored leasing the grounds. It is not improbable that the solution

after all may be nearer at hand than is supposed, and may come in a way that does not appear to have been much considered in all the discussion which has taken place. I refer to the present condition of the oyster fund, which does not give any promise, even from the most hopeful standpoint, of holding out much longer.

The appended statement shows the condition of the oyster fund for a period of ten years. This fund was established by an act of the General Assembly of 1865, and accrues from the fines imposed for violations of the oyster laws and from the monies received from dredgers' licenses. This is a separate fund from other monies in the State Treasury, and is exclusively used for the maintaining of proper and sufficient police protection of fish and oysters in Maryland waters, and the keeping in repair and supplying the necessary means of sailing the boats and vessels of the State Fishery Force. The first receipts accrued during the fiscal year 1865 and amounted to $14,030.20; up to 1868 this fund had increased to $144,697.69 when the expenses of the Oyster Police Force, which had been organized that year, were paid, leaving a balance September 30, 1868, of $123,294.93.

An examination of the statement will show that in 1882 $237,985.21 was standing to the credit of the fund, and a steady increase up to 1884; but after that year the fund shows a net average decrease of nearly $25,000 annually. The greatest decrease is shown in 1885-86, when it was $55,542.88. In 1888-89 the decrease was but $1,774.01; but since then it has been growing larger each year, until on September 30, 1892, but $46,708.48 remains to the fund.

Condition of the Oyster Fund.

Balance to credit of oyster fund, Sept. 30, 1882		$237,985.21
Receipts	$ 56,075.32	
Disbursements	54,114.13	
Net increase	$ 1,961.19	1,961.19
Balance to credit of oyster fund, Sept. 30, 1883		$239,946.40
Receipts	$ 67,650.78	
Disbursements	62,704.83	
Net increase	$ 4,945.95	4,945.95
Balance to credit of oyster fund, Sept. 30, 1884		$244,892.35
Receipts	$ 79,704.17	
Disbursements	127,089.56	
Net decrease	$ 47,385.39	47,385.39

Balance to credit of oyster fund, Sept. 30, 1885		$197,506.96
Receipts	$ 51,057.74	
Disbursements	106,600.62	
Net decrease	$ 55,542.88	55,542.88
Balance to credit of oyster fund, Sept. 30, 1886		$141,964.08
Receipts	$ 55,561.73	
Disbursements	67,221.88	
Net decrease	$ 11,660.15	11,660.15
Balance to credit of oyster fund, Sept. 30, 1887		$130,303.93
Receipts	$ 53,236.69	
Disbursements	67,913.13	
Net decrease	$ 14,676.74	14,676.74
Balance to credit of oyster fund, Sept. 30, 1888		$115,627.49
Receipts	$ 61,562.08	
Disbursements	63,306.09	
Net decrease	$ 1,744.01	1,744.01
Balance to credit of oyster fund, Sept. 30, 1889		$113,883.48
Receipts	$ 58,178.67	
Disbursements	70,955.91	
Net decrease	$ 12,777.24	12,777.24
Balance to credit of oyster fund, Sept. 30, 1890		$101,106.24
Receipts	$ 52,260.33	
Disbursements	73,645.81	
Net decrease	$ 21,385.48	21,385.48
Balance to credit of oyster fund, Sept. 30, 1891		$ 79,720.76
Receipts	$ 46,652.83	
Disbursements	79,665.11	
Net decrease	$ 33,012.28	33,012.28

If the receipts and disbursements average about the same for the coming years, it will be but a very short time when this fund will be entirely extinguished, and some other provision will have to be made for the purposes for which it was established, for it will be seen that during the past ten years the receipts have averaged slightly over $58,000, and the expenditures for the same period an average of over $77,000.

Taking this as a basis for an estimate as to the length of time the fund will last, the following results are shown:

Balance to credit of oyster fund, Sept. 30, 1892		$ 46,708.48
Estimated average receipts	$ 58,000.00	
Estimated average expenditures	77,000.00	
Net decrease	$ 19,000.00	19,000.00

Balance to credit of oyster fund, Sept. 30, 1893		$ 27,708.48
Estimated average receipts	$ 58,000.00	
Estimated average expenditures	77,000.00	
Net decrease	$ 19,000.00	19,000.00
Balance to credit of oyster fund, Sept. 30, 1894		$ 8,708.48
Estimated average receipts	$ 58,000.00	
Estimated average expenditures	77,000.00	
Net decrease	$ 19,000.00	19,000.00
Deficiency, September 30, 1895		$ 10,291 52

This estimate supposes that there will be no decrease in the revenue received and no increase in the expenditures. In proportion as the former decreases or the latter increases will the life of the fund extend. In point of fact, it is the general impression among those who have considered the matter that the fund will be exhausted by 1894, but in either event the necessity for some action by the next General Assembly will become imperative.

Whether the necessity for a sale or leasing of the barren oyster beds will appear as a result of this condition of the oyster fund, cannot yet be known; but should the issue be presented, it is by no means certain that the non-oyster-producing counties will consent to the setting apart of another fund for this purpose. Indeed it is confidently believed by men of careful thought that they will not, and that just as soon as the present fund is exhausted the State will lease the beds.

Such additional material is here presented, covering some of the most interesting features of this question as it has been possible to obtain.

This material represents the results of an investigation of the fisheries of the State conducted by the United States Fish Commission and by this Bureau in 1891–2, and is based upon very detailed information obtained from fishermen, dealers and packers, as well as the State and county officers, whose duties bring them in contact with the oyster interests. Among other things, the returns contain an individual statement covering the operations of each of the 1,600 vessels engaged in the industry. The years 1890 and 1891, as here considered and given in the tables, refer to the oyster seasons terminating in the spring of 1890 and 1891.

The importance and desirability of having accurate statistics showing the past and the present condition of the oyster industry of the State probably needs no demonstration. In the absence

of this information most of the legislation intended to protect the oyster and promote the fishery must depend on uncertain, if not erroneous, premises. While statistics of the oyster industry of Maryland have appeared from time to time, I am not aware that any complete figures purporting to cover all its phases have been published since 1880. It is therefore thought that the accompanying tables will be acceptable at this time, and will be interesting to show that the fishery and the dependent shore branches are much more extensive than is generally supposed.

The returns indicate that in 1891 32,104 persons were directly engaged in the industry; that the capital invested was $6,697,302, and that the value to the fishermen of the oysters taken was $5,295,866. Comparing these figures with the aggregates for the entire fishing interests of the coastal States of the United States, it is seen that the oyster industry of Maryland gave employment to nearly one-fourth of the persons engaged, representing nearly one-sixth of the capital invested, and yielded more than one-seventh of the money returned.

It is thought that the table giving in a condensed form the comparative statistics of this industry in 1880 and 1890, will prove of practical interest. The results of the fishery in 1880 were 10,600,000 bushels of oysters, valued at $4,730,476; in 1890, 10,450,087 bushels were taken, having a value of $4,854,456; in 1891 the yield was 9,945,058 bushels, worth $5,295,866. These figures considered alone do not indicate a very marked change in the oyster fishery since 1880, and to be rightly interpreted should be studied in conjunction with other phases of the industry brought out by the statistics. It is seen, for instance, that in order to produce an approximately similar, though smaller catch, 6,733 and 7,063 more fishermen were required in 1890 and 1891, respectively, than were engaged in 1880, a fact which as clearly as a diminished output indicates the depletion of the oyster beds.

The results of the dredging operations by the United States steamer Fish Hawk in Tangier Sound have not yet been entirely worked up by the United States Fish Commission and compared with the data obtained in 1878 and 1879 by Lieut. Francis Winslow. It is therefore impossible at present to draw any conclusions regarding the condition of the oyster bottom that could be thoroughly relied upon. During the summer and fall of 1891 the topographical part of the survey showing the positions and outlines of the beds, by the Fish Commission, occupied so much of the season that very soon after commencing to dredge, the

large oyster fleet began its operations, and the Fish Hawk was obliged to leave the grounds. The dredging was, however, again taken up the past summer by the same steamer, and it is the data then obtained that has not yet been reduced.

In 1891 the number of oysters of all sizes to the square yard on the three largest beds in Maryland waters was found to be as follows: Great Bed, 0.38; Terrapin Sands Bed, 0.9; Piney Island Bar Bed, 0.63. These were general averages over rank and scattered portions of the beds, and in comparing them with results of former investigations it must be taken into account that the Fish Hawk is a much more powerful vessel than the one used by Lieut. Winslow, and should obtain a relatively higher average. The oysters were found to be in a fairly good condition in most localities, but they were generally quite small, tending to indicate that sufficient time was not allowed between the dredging seasons to permit the oysters to attain a large size. It was also observed that there was rather a scarcity of young set over these grounds, but this may have been partly due to seasonal conditions, the rainfall during eight or nine months previous having been unusually heavy.

Oyster drills were abundant in this region and there were evidences that they had caused the destruction of a very large number of young oysters. Sponges, bryozoans, barnacles, and worn tubes were found covering the living oysters as well as the dead shells to a very great extent, and were doing much harm, but whether these forms are becoming more common than they used to be it was impossible to ascertain.

Table No. 1 shows by counties the number of persons employed in various capacities of the oyster industry in Maryland in 1890 and 1891. The total number of dredgers in the State in 1890 was 6,908. From Somerset county there were 2,736, more than from any of the other counties, from Baltimore city 2,378, from Dorchester 1,301, Talbot 166, Wicomico 97, Calvert 80, Anne Arundel 63, St. Mary's 58, while Kent had the smallest number, 29. Charles, Queen Anne's and Worcester, of all the tide-water counties, had none. In a total of 32,614 persons employed in various capacities in Maryland in that year, the following came from Baltimore city: Factory hands and other shoresmen, 8,689; dredgers and transporters, 2,814, making a total of 11,503 persons who earned their daily bread in this manner in Baltimore city. The leading tonging county for that year was Somerset, with 2,530 boats or shore fishermen. Worcester, at the bottom of the list, had 196. St. Mary's had 1,375 and Anne

Arundel had 1,697. The packing interests of Somerset are largely shown by the fact that this county supported 1,436 factory hands and other shoresmen.

A comparison with 1891 shows some interesting and suggestive changes, the most striking of which is the falling off in Baltimore city. The number of dredgers for 1891 was 2,015, or 363 less than the year before, while the number in the entire State was 6,652, a falling off of 256.

Here it will be seen that while the number of dredgers in the entire State in 1891 was 6,652, a falling off of 256, the number in Baltimore city alone was 2,015, or a loss of 363. There was an aggregate gain in Calvert, Dorchester, St. Mary's and Somerset of 165, and an aggregate falling off in Anne Arundel, Kent and Wicomico of 58. Baltimore city also shows a falling off in the number of factory hands and other shoresmen in 1891 of 859, and a falling off of persons employed in the various capacities enumerated of 1,106. Somerset still leads as the tonging county, in 1891 showing exactly the same figures as in 1890, while Worcester still stands at the bottom of the list with 145. St. Mary's has 1,503, a considerable gain, and Anne Arundel 1,782, also a gain. Somerset increases its number of factory hands to 1,545, showing a consequent increase in its packing interests. In the totals for the State in 1891 there is an increase of tongers and transporters, and a decrease of dredgers, making the combined decrease of these three 19. There is an increase of boat or shore fishermen of 349, a decrease of factory hands and other shoresmen of 840, and a decrease in the total of all persons employed in all the various capacities in the State of 510.

TABLE No. 1—*Showing by counties the number of persons employed in various capacities in the oyster industry of Maryland in 1890 and 1891.*

COUNTIES.	VESSEL FISHERMEN.								Boat or shore fishermen.		Factory hands and other shoresmen.		Total.	
	Dredgers.		*Tongers.		Transporters.		Total.							
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Anne Arundel	63	40	130	175	83	78	276	293	1,697	1,782	403	386	2,376	2,461
Baltimore City	2,378	2,015	.....	.....	436	552	2,814	2,567	.....	.....	8,689	7,830	11,503	10,397
Calvert	80	105	20	25	96	84	196	214	1,017	1,066	.....	.....	1,213	1,280
Charles	.....	.....	.....	.....	4	.....	4	.....	200	192	.....	.....	204	192
Dorchester	1,301	1,309	.....	.....	186	198	1,487	1,507	1,280	1,250	789	745	3,556	3,502
Kent	29	11	.....	.....	73	87	102	98	629	711	.....	.....	731	809
Queen Anne's	.....	.....	.....	.....	45	48	45	48	775	936	37	32	857	1,016
St. Mary's	58	82	.....	3	70	74	128	159	1,375	1,503	.....	.....	1,503	1,662
Somerset	2,736	2,844	.....	.....	217	266	2,953	3,110	2,530	2,530	1,436	1,545	6,919	7,185
Talbot	166	158	.....	.....	11	11	177	169	1,565	1,540	716	632	2,458	2,341
Wicomico	97	88	.....	.....	39	46	136	134	892	850	63	123	1,091	1,107
Worcester	.....	.....	7	7	.....	.....	7	7	196	145	.....	.....	203	152
Totals	6,908	6,652	157	210	1,260	1,444	8,325	8,306	12,156	12,505	12,133	11,293	32,614	32,104

*In some counties both dredges and tongs are carried on the same vessels; the persons recorded in this column are those who use tongs exclusively.

detailed table. It shows
tonging and transporting

TABLE No. 2—*Showing by counties the vessels, boats, apparatus, etc., employed in the oyster industry of Maryland in 1890 and 1891.*

ITEMS.	ANNE ARUNDEL.		BALTIMORE CITY.		CALVERT.		CHARLES.		DORCHESTER.		KENT.		QUEEN ANNE'S.		ST. MARY'S.		SOMERSET.		TALBOT.		WICOMICO.		WORCESTER.		TOTAL.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Vessels dredging.....No.	15	11	278	235	14	19	.....	.....	298	299	3	3	.....	.....	11	18	520	517	43	41	15	13	.....	.....	1,197	1,155
Tonnage.....	145.35	121.16	8,895.71	7,391.44	289.97	410.70	.....	.....	3,068.78	3,108.69	95.05	31.45	.....	.....	127.65	215.90	8,140.71	8,269.33	373.52	377.16	342.93	305.41	.....	.....	21,480.27	20,431.24
Value.....	$ 10,610	$ 9,615	$ 277,613	$ 228,645	$ 15,975	$ 22,805	.....	.....	$ 150,388	$ 151,150	$ 2,600	$ 1,075	.....	.....	$ 5,925	$ 12,475	$ 373,976	$ 376,005	$ 19,900	$ 18,875	$ 15,425	$ 14,225	.....	.....	$ 872,412	$ 855,470
Value of outfit.....	$ 2,250	$ 1,505	$ 105,764	$ 84,694	$ 3,195	$ 3,095	.....	.....	$ 61,387	$ 64,087	$ 1,050	$ 393	.....	.....	$ 1,685	$ 2,400	$ 131,270	$ 150,285	$ 8,360	$ 8,310	$ 5,299	$ 4,815	.....	.....	$ 318,245	$ 319,483
Vessels tonging.....No.	40	55	.....	.....	7	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	59	50	68
Tonnage.....	312.94	440.85	.....	.....	53.14	73.92	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.85	.....	.....	.....	.....	.....	.....	20.62	20.62	388.70	550.24
Value.....	$ 18,230	$ 25,790	.....	.....	$ 4,675	$ 5,345	.....	.....	.....	.....	.....	.....	.....	.....	.....	$ 750	.....	.....	.....	.....	.....	.....	$ 1,175	$ 1,150	$ 24,080	$ 33,035
Value of outfit.....	$ 3,960	$ 5,250	.....	.....	$ 620	$ 750	.....	.....	.....	.....	.....	.....	.....	.....	.....	$ 90	.....	.....	.....	.....	.....	.....	$ 85	$ 85	$ 4,665	$ 6,175
Vessels transporting only...No.	31	28	124	152	23	22	1	.....	42	45	22	20	17	18	19	21	49	60	3	3	8	10	.....	.....	540	599
Tonnage.....	536.09	492.22	4,932.38	5,741.73	932.67	894.07	26.09	.....	1,819.05	1,981.84	471.07	637.02	296.54	344.95	532.11	529.00	1,892.90	2,005.24	100.94	100.94	331.39	383.65	.....	.....	11,804.43	13,111.45
Value.....	$ 32,785	$ 27,050	$ 303,075	$ 219,675	$ 51,650	$ 49,175	$ 1,000	.....	$ 92,125	$ 98,100	$ 15,350	$ 20,350	$ 11,450	$ 15,150	$ 26,000	$ 23,650	$ 80,800	$ 91,150	$ 5,200	$ 5,200	$ 10,700	$ 19,500	.....	.....	$ 536,125	$ 509,000
Value of outfit.....	$ 2,555	$ 2,233	$ 14,764	$ 16,899	$ 3,870	$ 3,465	$ 145	.....	$ 10,175	$ 10,735	$ 3,714	$ 3,873	$ 2,142	$ 2,336	$ 2,543	$ 2,742	$ 11,350	$ 13,822	$ 600	$ 596	$ 2,055	$ 2,495	.....	.....	$ 53,793	$ 59,190
Total vessels.....No.	86	94	402	387	46	50	1	.....	340	344	25	23	17	18	30	40	569	577	46	44	23	23	3	3	1,508	1,622
Tonnage.....	994.98	1,054.33	13,828.09	13,333.17	1,277.78	1,380.69	26.09	.....	4,887.83	5,050.53	566.12	668.47	296.54	344.95	659.76	758.44	9,033.61	10,274.57	474.46	478.10	674.32	689.06	20.62	20.62	33,670.40	34,092.03
Value.....	$ 61,625	$ 62,455	$ 480,688	$ 448,320	$ 72,300	$ 77,385	$ 1,000	.....	$ 242,513	$ 249,250	$ 17,950	$ 21,425	$ 11,450	$ 15,150	$ 31,925	$ 36,875	$ 454,776	$ 497,758	$ 25,100	$ 24,075	$ 32,125	$ 33,725	$ 1,175	$ 1,150	$ 1,432,027	$ 1,437,305
Value of outfit.....	$ 8,690	$ 8,988	$ 118,528	$ 101,593	$ 7,685	$ 7,250	$ 145	.....	$ 71,562	$ 74,822	$ 4,764	$ 4,225	$ 2,142	$ 2,336	$ 4,228	$ 5,232	$ 142,530	$ 164,107	$ 8,960	$ 8,900	$ 7,334	$ 7,310	$ 85	$ 85	$ 376,645	$ 384,848
Boats.....No.	505	595	.....	.....	480	516	92	94	581	550	363	410	406	488	672	742	1,267	1,267	728	735	364	350	147	112	5,665	5,859
Value.....	$ 42,450	$ 47,500	.....	.....	$ 23,768	$ 25,696	$ 4,470	$ 4,560	$ 46,356	$ 44,350	$ 17,794	$ 19,069	$ 34,789	$ 90,080	$ 39,210	$ 42,355	$ 143,925	$ 143,925	$ 64,400	$ 62,250	$ 31,850	$ 31,925	$ 8,760	$ 6,480	$ 450,006	$ 456,636
Apparatus on Vessels.																										
Dredges.....No.	20	14	556	470	36	38	.....	.....	010	612	6	3	.....	.....	32	32	1,281	1,134	88	83	41	34	.....	.....	2,650	2,419
Value.....	$ 750	$ 550	$ 25,020	$ 21,150	$ 1,040	$ 1,235	.....	.....	$ 27,218	$ 26,671	$ 395	$ 125	.....	.....	$ 933	$ 1,355	$ 54,986	$ 54,866	$ 3,760	$ 3,680	$ 1,890	$ 1,742	.....	.....	$ 115,992	$ 111,374
Tongs.....No.	130	173	.....	.....	20	25	.....	.....	72	108	.....	2	.....	.....	.....	3	208	172	2	2	.....	.....	7	7	439	494
Value.....	$ 1,300	$ 1,750	.....	.....	$ 200	$ 250	.....	.....	$ 589	$ 883	.....	$ 12	.....	.....	.....	$ 20	$ 1,713	$ 1,344	$ 15	$ 18	.....	.....	$ 70	$ 70	$ 3,887	$ 4,287
Apparatus on Boats.																										
Dredges.....No.	.....	.....	.....	.....	43	7	.....	.....	225	240	.....	.....	.....	.....	42	25	974	974	325	310	150	170	.....	.....	1,759	1,726
Value.....	.....	.....	.....	.....	$ 1,290	$ 210	.....	.....	$ 1,125	$ 1,200	.....	.....	.....	.....	$ 1,565	$ 905	$ 3,397	$ 3,388	$ 1,625	$ 1,550	$ 900	$ 1,020	.....	.....	$ 9,902	$ 8,363
Tongs.....No.	1,667	1,782	.....	.....	931	1,052	188	192	1,425	1,335	687	797	827	1,013	1,305	1,461	2,235	2,235	1,550	1,580	825	775	196	145	11,866	12,367
Value.....	$ 10,182	$ 10,692	.....	.....	$ 9,310	$ 10,520	$ 996	$ 1,020	$ 7,125	$ 6,675	$ 3,435	$ 4,305	$ 4,135	$ 5,065	$ 9,090	$ 10,390	$ 7,882	$ 7,873	$ 7,750	$ 7,900	$ 4,950	$ 4,650	$ 980	$ 725	$ 65,835	$ 69,814
Total Apparatus.																										
Dredges.....No.	20	14	556	470	69	45	.....	.....	835	852	6	3	.....	.....	64	57	2,255	2,108	413	393	191	204	.....	.....	4,409	4,145
Value.....	$ 750	$ 550	$ 25,020	$ 21,150	$ 2,330	$ 1,445	.....	.....	$ 28,343	$ 27,871	$ 395	$ 125	.....	.....	$ 2,498	$ 2,350	$ 58,383	$ 58,254	$ 5,385	$ 5,230	$ 2,790	$ 2,762	.....	.....	$ 125,894	$ 119,737
Tongs.....No.	1,827	1,957	.....	.....	951	1,077	188	192	1,497	1,443	687	799	827	1,013	1,305	1,464	2,443	2,407	1,552	1,582	825	775	203	152	12,305	12,861
Value.....	$ 11,482	$ 12,442	.....	.....	$ 9,510	$ 10,770	$ 996	$ 1,020	$ 7,714	$ 7,498	$ 3,435	$ 4,317	$ 4,135	$ 5,065	$ 9,090	$ 10,410	$ 9,595	$ 9,316	$ 7,765	$ 7,918	$ 4,950	$ 4,650	$ 1,050	$ 795	$ 68,722	$ 74,101
Shore property.....	$ 34,500	$ 33,000	$2,044,600	$2,013,100	.....	.....	.....	.....	$ 49,430	$ 50,850	.....	.....	.....	.....	$ 1,750	$ 1,750	.....	.....	$ 115,750	$ 119,075	$ 47,075	$ 49,450	$ 3,500	$ 8,000	$ 8,000	$ 6,500	$2,303,505	$2,282,725
Cash capital.....	$ 40,000	$ 39,500	$1,835,000	$1,655,000	.....	.....	.....	.....	$ 76,500	$ 75,100	.....	.....	.....	.....	$ 1,300	$ 1,300	.....	.....	$ 113,850	$ 124,350	$ 37,200	$ 35,200	$ 5,000	$ 11,500	$2,108,850	$1,941,950
Total capital invested.....	$ 199,537	$ 202,435	$4,593,836	$4,239,163	$ 117,593	$ 122,486	$ 6,611	$ 5,580	$ 522,612	$ 529,641	$ 44,338	$ 49,701	$ 45,566	$ 55,687	$ 86,951	$ 97,322	$1,038,796	$1,080,682	$ 196,785	$ 198,023	$ 87,349	$ 100,672	$ 19,070	$ 15,010	$6,869,047	$6,697,302

Table No. 2 is a very complete and detailed table. It shows by counties the number of dredging, tonging and transporting vessels and boats, the tonnage of each class from each county, and the value of the investments of citizens of each county in every class of oyster boats, as well as the outfit of such vessel and boat for each county. It also shows the shore property and cash capital invested in the oyster business in each county. The gross tonnage in 1890 of dredging vessels amounted to 21,480.27, of which Baltimore city had 8,895.71, Somerset 8,140.71 and Dorchester 3,068.78. Kent is the lowest with 95.05 tons. The total estimated value of the vessels engaged in the oyster industry was $1,432,627, and the value of boats $450,006. The total value of apparatus invested was as follows: Dredges $115,992, tongs $3,387; value of apparatus on boats: Dredges $9,902, tongs $65,835. The total estimated value of shore property was $2,305,305, the total cash capital $2,108,850. The total capital invested in the above classes of property was $6,869,047.

In 1891 a falling off is shown in the gross tonnage of dredging vessels of 1,049.03, the gross tonnage for the latter year being 20,431.24, as against 21,480.27 in 1890. The gross tonnage of these vessels in Baltimore city also falls off considerably, the figures for 1891 being 7,591.44, a decrease of 1,304.27, more than that of the entire State. The gross tonnage for Somerset was 8,269.33, an increase of 128.62. Dorchester had 3,108.69, also a gain, while Kent dropped from 95.05 to 31.45, a falling off of over two-thirds.

The total estimated value of vessels engaged in the industry was $1,437,505, an increase of $4,878 over 1890, and the value of boats was $456,636, an increase of $6,630. The total value of apparatus on vessels for 1890 was as follows: Dredges, $111,374; tongs, $4,287; a falling off in the former of $4,618, and an increase in the latter of $900 as compared with 1890. The value of apparatus on boats was dredges, $8,363; tongs, $69,813, a decrease in the one instance of $1,539, and in the other an increase of $3,979. A considerable decrease is shown in the total estimated value of shore property, the total cash capital and the total capital invested in the above classes of property. In the order named, these were valued in 1891 at $2,282,-525, $1,941,950 and $6,697,302, showing a loss of $22,780, $166,900 and $171,745 respectively.

Table No. 3 shows by counties the quantity and value of oysters taken in 1891 with a statement of the yield by dredges and tongs in the vessel and boat fisheries. In the quantity and value of oysters taken the following rank is shown for 1890: Somerset, 3,889,652 bushels, valued at $1,755,440; Dorchester, 1,580,141 bushels, valued at $711,180; Baltimore city, 1,076,596 bushels, valued at $590,031; Anne Arundel, 978,237 bushels, valued at $379,506; Talbot, 670,765 bushels, valued at $301,855; St. Mary's, 598,514 bushels, valued at $265,826; Wicomico, 448,685 bushels, valued at $201,908; Queen Anne's, 408,450 bushels, valued at $165,168; Calvert, 361,520 bushels, valued at $168,353; Kent, 238,742 bushels, valued at $121,738; Worcester, 190,455 bushels, valued at $165,032; Charles, 69,360 bushels, valued at $28,410.

For 1891 no material deviation is shown in the order in which these counties come. Somerset still comes first, with 4,237,282 bushels, valued at $2,099,352; Dorchester second, with 1,651,946 bushels, valued at $825,982, and Baltimore city third, with 767,046 bushels, valued at $554,231. Anne Arundel and Talbot counties have changed places, Talbot coming fourth, with 653,000 bushels, valued at $326,492, and Anne Arundel fifth, with 615,405 bushels, valued at $337,830, both counties however, showing a considerable decrease. The other counties hold the same positions: St. Mary's, 527,073 bushels, valued at $301,465; Wicomico, 395,690 bushels, valued at $198,706; Queen Anne's, 367,375 bushels, valued at $204,374; Calvert, 321,280 bushels, valued at $182,977; Kent, 239,300 bushels, valued at $143,538; Worcester, 115,143 bushels, valued at $93,070.

Charles makes the smallest showing, as in 1890, with 54,518 bushels, valued at $27,849. The total catch for 1890 was 10,450,087 bushels, and for 1891, 9,945,058 bushels, a decrease of 505,029 bushels; but the total value in 1891 was greater by $641,410 than in 1890, the figures being $5,295,866 against $4,854,456.

Of the total catch given above, 5,475,725 bushels were taken by dredgers, valued at $2,930,171, and 4,469,333 bushels by tongers, valued at $2,365,695. It will be seen by comparison with the figures of 1890 that there has been a falling off in the catch by dredgers of 83,119 bushels, and by tongers of 421,910 bushels; but an increase in value in both instances—in the first of $305,396, and the second of $136,014.

This table shows, not that oysters were produced in the counties above mentioned to the extent named, but that vessels owned in the various counties took the product in the proportion shown.

TABLE No. 3—*Showing by counties and apparatus the yield of the oyster fishery of Maryland in 1890 and 1891.*

ITEMS.	ANNE ARUNDEL.		BALTIMORE CITY.		CALVERT.		CHARLES.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Vessel Fishery.								
By dredges.....bushels	36,252	23,900	1,076,596	767,046	49,500	52,150	.....	.....
Value.....	$ 20,920	$ 16,300	$ 590,031	$ 554,231	$ 30,960	$ 34,420	.....	.....
By tongs.....bushels	89,360	94,705	.....	.....	11,560	11,120	.....	.....
Value.....	$ 42,436	$ 50,700	.....	.....	$ 5,388	$ 6,045	.....	.....
Boat Fishery.								
By dredges.....bushels	.....	.....	.....	.....	28,400	4,400	.....	.....
Value.....	.....	.....	.....	.....	$ 11,580	$ 1,880	.....	.....
By tongs.....bushels	791,625	496,800	.....	.....	272,060	253,610	69,360	54,518
Value.....	$ 316,150	$ 270,830	.....	.....	$ 120,425	$ 140,632	$ 28,410	$ 27,849
Total Output.								
By dredges.....bushels	36,252	23,900	1,076,596	767,046	77,900	56,550	.....	.....
Value.....	$ 20,920	$ 16,300	$ 590,031	$ 554,231	$ 42,540	$ 36,300	.....	.....
By tongs.....bushels	880,985	591,505	.....	.....	283,620	264,730	69,360	54,518
Value.....	$ 358,586	$ 321,530	.....	.....	$ 125,813	$ 146,677	$ 28,410	$ 27,849
Aggregate yield.....bushels	917,237	615,405	1,076,596	767,046	361,520	321,280	69,360	54,518
Value.....	$ 379,506	$ 337,830	$ 590,031	$ 554,231	$ 168,353	$ 182,977	$ 28,410	$ 27,849

TABLE No. 3—*Continued.*

ITEMS.	DORCHESTER.		KENT.		QUEEN ANNE.		SAINT MARY.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Vessel Fishery.								
By dredges.....bushels	1,077,091	1,130,446	10,737	2,500	.....	.....	27,250	32,570
Value.....	$ 484,457	$ 564,792	$ 7,281	$ 2,000	.....	.....	$ 13,210	$ 19,250
By tongs.....bushels	7,200	10,800	.....	300	.....	.....	.....	2,200
Value.....	$ 3,600	$ 5,940	.....	$ 150	.....	.....	.....	$ 1,150
Boat Fishery.								
By dredges.....bushels	94,510	111,840	.....	.....	.....	.....	23,220	10,536
Value.....	$ 42,529	$ 55,898	.....	.....	.....	.....	$ 8,584	$ 4,974
By tongs.....bushels	401,340	398,860	227,975	236,500	408,450	367,375	548,044	481,767
Value.....	$ 180,603	$ 199,352	$ 114,457	$ 141,388	$ 165,168	$ 204,374	$ 244,032	$ 276,091
Total Output.								
By dredges.....bushels	1,171,601	1,242,286	10,737	2,500	.....	.....	50,470	43,106
Value.....	$ 526,986	$ 620,690	$ 7,281	$ 2,000	.....	.....	$ 21,794	$ 24,224
By tongs.....bushels	408,540	409,660	227,975	236,800	408,450	367,375	548,044	483,967
Value.....	$ 184,203	$ 205,292	$ 114,457	$ 141,538	$ 165,168	$ 204,374	$ 244,032	$ 277,241
Aggregate yield.....bushels	1,580,141	1,651,946	238,712	239,300	408,450	367,375	598,514	527,073
Value.....	$ 711,189	$ 825,982	$ 121,738	$ 143,538	$ 165,168	$ 204,374	$ 265,826	$ 301,465

TABLE NO. 3—*Concluded.*

ITEMS.	SOMERSET.		TALBOT.		WICOMICO.		WORCESTER.		TOTAL.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Vessel Fishery.										
By dredges.....bushels	2,231,291	2,446,027	145,265	142,300	86,285	75,590	.....	.....	4,740,267	4,672,529
Value.....	$ 1,008,424	$ 1,238,344	$ 65,370	$ 71,142	$ 38,828	$ 38,656	.....	.....	$ 2,259,481	$ 2,539,135
By tongs.....bushels	20,800	17,200	200	200	.....	.....	5,400	5,060	134,520	141,585
Value.....	$ 10,400	$ 9,460	$ 100	$ 100	.....	.....	$ 2,950	$ 3,160	$ 64,874	$ 76,705
Boat Fishery.										
By dredges.....bushels	478,129	496,320	126,758	108,700	67,560	71,400	.....	.....	818,577	803,196
Value.....	$ 215,158	$ 238,234	$ 57,041	$ 54,350	$ 30,402	$ 35,700	.....	.....	$ 365,294	$ 391,036
By tongs.....bushels	1,159,432	1,277,735	398,542	401,800	294,840	248,700	185,055	110,083	4,756,723	4,327,748
Value.....	$ 521,458	$ 613,314	$ 179,344	$ 200,900	$ 132,678	$ 124,350	$ 162,082	$ 89,910	$ 2,164,807	$ 2,288,990
Total Output.										
By dredges.....bushels	2,709,420	2,942,347	272,023	251,000	153,845	146,990	.....	.....	5,558,844	5,475,725
Value.....	$ 1,223,582	$ 1,476,578	$ 122,411	$ 125,492	$ 69,230	$ 74,356	.....	.....	$ 2,624,775	$ 2,930,171
By tongs.....bushels	1,180,232	1,294,935	398,742	402,000	294,840	248,700	190,455	115,143	4,891,243	4,469,333
Value.....	$ 531,858	$ 622,774	$ 179,444	$ 201,000	$ 132,678	$ 124,350	$ 165,032	$ 93,070	$ 2,229,681	$ 2,365,695
Aggregate yield....bushels	3,889,652	4,237,282	670,765	653,000	448,685	395,690	190,455	115,143	10,450,087	9,945,058
Value.....	$ 1,755,440	$ 2,099,352	$ 301,855	$ 326,492	$ 201,908	$ 198,706	$ 165,032	$ 93,070	$ 4,854,456	$ 5,295,866

Table No. 4 shows by counties the extent of the oyster packing and canning trades of Maryland in 1890 and 1891. Of the entire yield from the Chesapeake Bay and tributaries there were packed in all the canning houses in the State in 1890, 8,691,629 bushels, of which Baltimore canning houses packed 5,697,265, or 65 per cent. of the whole. The value paid for the total packed was $4,296,386; the value received, $6,423,142; while the value paid in Baltimore city was $2,970,828, and the value received $4,391,061, an enhancement in value in the State of $2,126,756, and in Baltimore city of $1,420,233, or about two-thirds of the whole. Somerset is next to Baltimore with 1,140,753 bushels, for which the value paid was $513,138, and the value received was $780,376, an enhanced value of $267,238. The other counties in the order of their yield are Dorchester, Talbot, Anne Arundel, Wicomico and Queen Anne's.

In 1891 there were packed in the entire State, 7,002,312 bushels, of which 4,192,020 bushels were packed in Baltimore city, a decrease in State and city respectively of 1,689,317 bushels and 1,505,245 bushels, or 19 and 27 per cent. The value paid in the State was $4,180,347 in 1891; the value received was $5,903,101, a decrease of $116,039 and $520,041. In Baltimore city there is also a decreased pack shown in 1891 of 1,405,245 bushels, in value paid of $141,263, and in value received of $404,960.

The total number of firms engaged in the State in 1890 was 142, of which seventy were in Baltimore city, twenty-seven in Somerset, eighteen in Dorchester, fourteen in Talbot, ten in Anne Arundel, two in Queen Anne's and one in Wicomico. These firms employed 12,086 people, paid $1,157,278 in wages, had a cash capital of $1,967,950 and a property value of $2,240,855. Out of the total number of employes Baltimore city had 8,649 to whom $727,241 were paid in wages, a cash capital of $1,695,000 and a property value of $1,989,600. Somerset employed 1,429 persons, paid $165,886 in wages, had a cash capital of $112,950 and a property value of $114,300. Dorchester county employed 1,789, paid $94,440 in wages, had a cash capital of $76,500 and a property value of $49,430. Talbot employed 716 persons, paid $102,976 in wages, had a cash capital of $37,200, and a property value of $47,975.

The figures for 1891 show a very general decrease. The total number of firms in the State was 141, or one less than in 1890. The number of persons employed was 11,243, a decrease of 843. The value of property was $2,210,975, a de-

crease of $29,910. The cash capital, $1,785,850, a decrease of $182,100, and the wages paid, $914,953, a decrease of $244,325 or 21 per cent. Baltimore city had sixty-eight firms in 1891, two less than in 1890. These employed 7,787 persons, a decrease of 862, at a property value of $1,949,500, a decrease of $40,100; had a cash capital of $1,500,000, a decrease of $195,000, and paid in wages $527,150, a decrease of $200,091 or 28 per cent.

Somerset had one more firm than in 1890 or twenty-eight in all, and shows an increase of 109 employes, $3,325 in the value of property, $10,300 in cash capital, and $15,789 in wages paid. Talbot had thirteen firms in 1891 and 632 persons employed, a slight falling off in both; the value of property is increased to $49,450, but the cash capital has decreased $2,000, and there is a falling off in wages paid of $22,241.

Dorchester had nineteen firms, one more than in 1890, whose property was valued at $50,850, an increase over 1890, but there has been a falling off in the number of persons employed and wages paid. Anne Arundel had one firm less than in 1890, and a decreased cash capital. Wicomico had one firm more than in 1890, and more than doubled in employes, value of property, cash capital and wages. Queen Anne's held about the same position as in 1890.

TABLE No. 4—*Showing by counties the extent of the Oyster Packing and Canning Trades of Maryland in 1890 and 1891.*

ITEMS.	ANNE ARUNDEL.		BALTIMORE CITY.		DORCHESTER.		QUEEN ANNE'S.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Number of firms	10	9	70	68	18	19	2	2
Number of persons employed	403	386	8,649	7,787	789	745	37	32
Value of property	$ 34,500	$ 33,000	$1,989,600	$1,949,500	$ 49,430	$ 50,850	$ 1,750	$ 1,750
Cash capital	$ 40,000	$ 39,500	$1,695,000	$1,500,000	$ 76,500	$ 75,100	$ 1,300	$ 1,300
Wages paid	$ 56,500	$ 34,800	$ 727,241	$ 527,150	$ 94,440	$ 83,910	$ 5,310	$ 5,050
Oysters utilized in the packing trade, bushels.	387,941	261,523	3,206,177	2,331,228	674,200	583,783	35,000	33,000
Value paid	$139,680	$136,240	$1,899,660	$1,806,129	$303,390	$294,526	$ 14,500	$16,500
Oysters sold.....gallons	271,620	201,064	2,620,721	1,863,401	451,254	398,935	23,700	22,400
Value received	$231,860	$187,910	$2,662,076	$2,373,526	$456,558	$407,954	$ 23,751	$22,530
Oysters utilized in the canning trade, bushels.	.....	.....	2,491,088	1,860,792	.....	.....	.....	.....
Value paid	.....	.....	$1,071,168	$1,023,436	.....	.....	.....	.....
One-pound cans prepared.....No.	.....	.....	9,569,160	7,890,632	.....	.....	.....	.....
Value	.....	.....	$ 723,027	$ 632,744	.....	.....	.....	.....
Two-pound cans prepared.....No.	.....	.....	4,579,356	3,995,521	.....	.....	.....	.....
Value	.....	.....	$ 632,138	$ 621,146	.....	.....	.....	.....
Miscellaneous cans prepared.....No.	.....	.....	3,337,407	2,817,263	.....	.....	.....	.....
Value	.....	.....	$ 373,820	$ 358,685	.....	.....	.....	.....
Total oysters handled.....bushels.	387,941	261,523	5,697,265	4,192,020	674,200	583,783	35,000	33,000
Value paid	$139,680	$136,240	$2,970,828	$2,829,565	$303,390	$294,526	$ 14,500	$16,500
Value received	$231,860	$187,910	$4,391,061	3,986,101	$456,558	$407,954	$ 23,751	$22,530
Enhancement in value	$ 92,180	$ 51,670	$1,420,233	$1,156,536	$153,168	$113,428	$ 9,251	$ 6,030

TABLE No. 4—*Concluded.*

ITEMS.	SOMERSET.		TALBOT.		WICOMICO.		TOTAL.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
Number of firms	27	28	14	13	1	2	142	141
Number of persons employed	1,429	1,538	716	632	63	123	12,086	11,243
Value of property	$114,300	$117,625	$47,975	$ 49,450	$ 3,300	$ 8,800	$2,240,855	$2,210,975
Cash capital	$112,950	$123,250	$37,200	$ 35,200	$ 5,000	$ 11,500	$1,967,950	$1,785,850
Wages paid	$165,886	$181,675	$102,976	$ 80,735	$ 4,925	$ 11,633	$1,157,278	$ 914,953
Oysters utilized in the packing trade, bushels.	1,140,753	1,259,040	709,970	562,446	46,500	110,500	6,200,541	5,141,520
Value paid	$513,138	$570,969	$333,925	$277,297	$20,925	$ 55,250	$3,225,218	$3,156,911
Oysters sold.....gallons.	771,558	848,206	484,595	382,170	31,500	74,950	4,654,948	3,791,126
Value received	$780,376	$834,034	$505,976	$386,892	$33,560	$ 77,680	$4,694,157	$4,290,526
Oysters utilized in the canning trade, bushels.	.....	.....	.....	.....	.....	.....	2,491,088	1,860,792
Value paid	.....	.....	.....	.....	.....	.....	$1,071,168	$1,023,436
One-pound cans prepared.....No.	.....	.....	.....	.....	.....	.....	9,569,160	7,890,632
Value	.....	.....	.....	.....	.....	.....	$ 723,027	$ 632,744
Two-pound cans prepared.....No.	.....	.....	.....	.....	.....	.....	4,579,356	3,995,521
Value	.....	.....	.....	.....	.....	.....	$ 632,138	$ 621,146
Miscellaneous cans prepared.....No.	.....	.....	.....	.....	.....	.....	3,337,407	2,817,263
Value	.....	.....	.....	.....	.....	.....	$ 373,820	$ 358,685
Total oysters handled.....bushels.	1,140,753	1,259,040	709,970	562,446	46,500	110,500	8,691,629	7,002,312
Value paid	$513,138	$570,969	$333,925	$277,297	$20,925	$ 55,250	$4,296,386	$4,180,347
Value received	$780,376	$834,034	$505,976	$386,892	$33,560	$ 77,680	$6,423,142	$5,903,101
Enhancement in value	$267,238	$263,065	$172,051	$109,595	$12,635	$ 22,430	$2,126,756	$1,722,754

NOTE.—In addition to the above figures, sixteen firms in 1890 and seven in 1891 engaged in the wholesale trade in shell oysters in Baltimore city and Somerset county; these employed forty-seven persons the first year and fifty the next; the shore property occupied was valued at $56,450 in 1890 and $65,050 in 1891, the cash capital being $140,900 in 1890 and $156,100 in 1891; 5,931,600 bushels of oysters, with a cost price of $3,145,974 and a selling value of $3,237,685, were handled in 1890, and 4,401,650 bushels, for which $3,014,727 was paid and $3,084,571 received, were handled in 1891.

Table No. 5 shows the comparative statistics of the oyster industry in Maryland in 1880 and 1890. In 1880 there were employed 13,748 fishermen and in 1890, 20,481, an increase of nearly 50 per cent. There were 9,664 shoresmen in 1880 and 12,133 in 1890. The value of vessels increased in that time from $1,750,000 to $1,809,270, the value of boats from $130,520 to $450,006, and of apparatus from $161,480 to $195,616. The shore property and cash capital increased from $3,992,350 to $4,414,155, the total investment from $6,034,350 to $6,869,047. The number of bushels of oysters taken in 1880 was 10,600,000 and in 1890 10,450,000, a difference of 150,000 bushels. The value of the catch in 1880 was $4,730,476 and in 1890 $4,854,456, an increase of $123,980.

In the packing and canning trades the number of firms increased from 98 to 142, the number of persons employed from 9,664 to 12,086, the capital invested from $3,928,376 to $4,208,805; the number of bushels packed raw from 4,930,301 to 6,200,541, the value as sold from $2,725,737 to $4,694,157; the number of bushels canned from 2,723,191 to 2,491,008, the value as sold from $1,268,112 to $1,728,985; the total number of bushels consumed from 7,653,492 to 8,691,594, and the value as sold from $3,993,848 to $6,423,142.

5—*Comparative Statistics of the Oyster Industry of Maryland in 1880 and 1890.*

Items.	1880.	1890.
1.—*The Entire Industry.*		
Fishermen	13,748	20,481
Shoresmen	9,664	12,133
Vessels.....No.	1,450	1,598
Value	$1,750,000	$1,809,270
Boats.....No.	1,825	5,665
Value	$130,520	$450,006
Value of apparatus	$161,480	$195,616
Shore property and cash capital	$3,992,350	$4,414,155
Total investment	$6,034,350	$6,869,047
Oysters taken.....Bushels.	10,600,000	10,450,087
Value	$4,730,476	$4,854,456
2.—*The Packing and Canning Trades.*		
Firms engaged	98	142
Persons employed	9,664	12,086
Capital invested	$3,928,376	$4,208,805
Oysters packed raw.....Bushels.	4,930,301	6,200,541
Value as sold	$2,725,737	$4,694,157
Oysters canned.....Bushels.	2,723,191	2,491,008
Value as sold	$1,268,112	$1,728,985
Total oysters consumed.....Bushels.	7,653,492	8,691,549
Value as sold	$3,993,848	$6,423,142

Table No. 6, based on returns received directly from the clerks to the county courts, by whom tonging and scraping licenses are issued, reveals some material variations from the figures in the preceding tables, which are based on the returns received from the United States Fish Commissioner, particularly as to the number of men engaged. The number is considerably in excess of that shown above. This table shows the number of scrapers and tongers' licenses issued by counties for the seasons 1891-92, and 1892-93.

In the case of Worcester county, 172 tongers' licenses are reported, though this is only an estimate in part. There were 122 licenses up to the date of my inquiry, and it was estimated by the county clerk that about fifty more would be issued up to the close of the season.

There are only three counties issuing scrapers' licenses, viz., Dorchester, Somerset and Talbot. Somerset county issued the largest number of licenses, though not receiving as much revenue as Dorchester. This is accounted for by the fact that scrapers' licenses are issued according to tonnage, showing therefore that the boats of Dorchester were larger than those of Somerset.

The scrape boats average five men to each boat, and the tong boats average two each. In addition to these there have been 821 dredge boats licensed in 1891-92, and 767 in 1892-93, with ten men each. There were also about 350 "Buy" boats in 1891-92, and 400 in 1892-93, which average four men to each boat. We thus find that there was a total of 28,862 men afloat in 1891-92, and 32,404 in 1892-93, an increase of 3,542.

The dredgers' license is charged for at the rate of $3 a ton; scrapers at $2 a ton, except in Somerset county, which charges but $1 a ton; tongers at $3.50 each, fifty cents of which is the clerk's fee for issuing them. Scrapers are not permitted to have boats of over ten tons. All revenue from dredgers' licenses goes to the oyster fund, together with ten per cent. of the tongers' and scrapers' licenses. The other ninety per cent. goes to the school fund. Prior to an act of the last Legislature the whole of this latter fund went to the school fund.

It will be noticed that in Table No. 1 the total number of dredgers in 1890 is given as 6,908, while Table No. 7, showing the number of dredgers' licenses issued since 1865, puts the number of boats at 860. Each boat will average ten men, thus making a total of 8,600 men, as against 6,908, as shown by Table

No. 1. A similar disparity is seen to exist in 1891, the figures from the Fish Commissioner showing 6,652 men engaged in dredging, while Table No. 7 shows that 821 dredge boat licenses were issued, which would show a total of 8,210 men engaged in the business that year.

It will also be seen that Table No. 6 shows a considerable number of tongers in excess of those shown by Table No. 1; but this is in a measure explained by the foot note to that table, which states that in some counties both dredges and tongs are carried on the same vessel, and only such persons are recorded as use tongs exclusively.

TABLE No. 6—*Showing by counties the number of scrapers' and tongers' licenses issued, and the revenue derived from same for seasons of 1891–92, and 1892–93.*

COUNTIES.	Number scrapers' licenses issued.		Revenue derived from scrapers' licenses.		Number of tongers' licenses issued.		Revenue derived from tongers' licenses.		Revenue derived from scrapers' and tongers' licenses.	
	1891–92.	1892–93.	1891–92.	1892–93.	1891–92.	1892–93.	1891–92.	1892–93.	1891–92.	1892–93.
Anne Arundel					615	1,160	$ 1,953.00	$ 3,480.00	$ 1,953.00	$ 3,480.00
Calvert					531	825	1,871.00	2,475.00	1,871.00	2,475.00
Charles					122	173	316.00	519.00	316.00	519.00
Dorchester	582	483	$ 7,937.00	$ 6,325.00	933	1,225	2,799.00	3,675.00	10,736.00	10,000.00
Kent					862	726	2,586.00	2,178.00	2,586.00	2,178.00
Queen Anne's					1,064	924	3,192.00	2,772.00	3,192.00	2,772.00
Somerset	640	645	4,463.01	5,201.69	330	475	1,140.00	1,425.00	5,603.01	7,626.69
St. Mary's					759	1,085	2,191.00	3,265.00	2,191.00	3,265.00
Talbot	78	102	1,267.92	1,638.01	727	1,088	2,361.40	3,100.80	3,629.32	4,738.81
Wicomico					333	639	1,352.00	1,917.00	1,352.00	1,917.00
Worcester					100	172	300.00	516.00	300.00	516.00
Total	1,300	1,230	$13,667.93	$13,164.70	6,376	8,492	$20,061.40	$25,322.80	$33,729.33	$38,487.50

Table No. 7 shows the complete record of licenses issued to dredge boats from 1865, when the oyster fund was first established, up to 1892 inclusive. It will be seen that the licenses are regulated by the tonnage of each boat. In 1885 1,307 licenses were issued, which was the result of the passage of an act by the General Assembly requiring "Buy" boats to take out licenses. "Buy" boats are those which go down the bay to buy the oysters which have already been caught by the dredgers. The act requiring these boats to obtain licenses was repealed the following year, and what appears to be a falling off in the number issued is owing to the repeal of that act.

TABLE NO. 7—*Showing the number of Dredge Licenses issued from 1865–1892 and revenue derived.*

YEAR.	NUMBER OF LICENSES ISSUED.	TONNAGE FOR WHOLE SEASON.	AMOUNT PAID INTO STATE TREASURY THEREFOR.
1865	391	4,028	$ 12,111.20
1866	401	12,114	48,463.22
1867	438	5,629	22,515.29
1868	565	8,134	32,535.90
1869	634	11,700	46,800.86
1870	594	9,669	38,675.80
1871	556	10,397	41,587.46
1872	616	9,835	39,339.62
1873	660	13,539	54,159.42
1874	618	7,557	30,227.33
1875	670	10,589	42,355.58
1876	677	12,117	48,468.68
1877	560	12,459	49,837.46
1878	435	9,352	37,408.39
1879	327	8,894	31,173.29
1880	531	4,651	18,606.50
1881	736	10,147	40,589.98
1882	674	13,145	52,582.05
1883	499	12,210	48,841.64
1884	500	16,252	65,700.75
1885	*1,307	19,573	78,292.77
1886	877	12,408	49,631.59
1887	811	13,103	52,411.68
1888	807	12,169	48,675.54
1889	743	14,482	57,928.72
1890	860	13,236	52,945.27
1891	821	12,569	50,275.03
1892	767	11,180	44,720.84
Total.....	18,075	411,138	$1,236,861.96

*350 or 400 "Buy" boats were required to take out license by Act of 1884, afterwards declared unconstitutional.

Table No. 8 shows the number of oyster boats from Baltimore city, the number of men shipped, wages paid, the advance of wages and the nationality of men for the season of 1891–92, as shown by the returns of the State Shipping Commissioners. The law requires each shipping commissioner to make and certify in triplicate all contracts of engagement of men, one of which shall be sent to this Bureau to be preserved.

No returns have been received at this office for the month of March. The total number of boats is shown to be 1,100, the total number of men shipped 5,770, the total wages paid $83,-280, an average of $14.43 per month, the advance of wages $22,688. It will be seen that nearly every nationality is represented by the men who are engaged in this work, but that a large majority of them are citizens by birth of the United States, the number being 2,525, or 44 per cent. Of those of foreign extraction 1,144 are from Ireland, 1,014 from Germany, and the smallest number, three, from Italy.

No returns were received at this office from the shipping commissioners outside of Baltimore city, of which there are six, one in Talbot county, one in Dorchester, two in Somerset, one in Calvert and one in Anne Arundel.

TABLE NO. 8—*Showing the number of boats and men shipped during the season of 1891-92 by the State Shipping Commissioners, the wages paid, advances of wages made, and nationality of the men.*

SHIPPING COMMISSIONERS.	Number of Boats.	Men Shipped.	Wages Paid.	Advances Made.	NATIONALITY OF MEN.																	
					United States	Spain.	England.	Ireland.	Poland.	Russia.	Germany.	Scotland.	Africa.	Canada.	Portugal.	Switzerland.	France.	Norway.	Sweden.	Denmark.	Italy.	Austria.	Holland.
J. T. Parsons	114	595	$ 8,364	$2,212	271	...	29	111	33	1	118	7	1	12	...	2	3	3	...	3	...	1	...
W. A. Callahan	331	1,559	22,961	9,455	784	4	60	206	49	44	269	27	1	12	...	13	13	7	28	11	1	28	2
Joseph A. King	411	2,301	33,225	7,158	973	5	120	488	98	23	419	33	7	14	6	19	15	5	13	11	...	49	3
A. J. Smith	67	351	4,329	163	126	...	23	78	15	25	51	7	...	6	...	1	10	...	2	...	1	6	...
Thomas Galloway	177	964	14,401	3,700	371	...	58	261	21	11	157	45	4	10	...	2	5	3	3	5	1	5	2
Totals	1,100	5,770	$83,280	$22,688	2,525	9	290	1,144	216	104	1,014	119	13	54	6	37	46	18	46	30	3	89	7

TABLE NO. 9—*Showing the number of bushels of oysters measured in the State of Maryland for seasons of 1890-91 and 1891-92.*

	1890-91.	1891-92.
Annapolis	267,000	188,483
Baltimore	4,393,600	354,320
Cambridge	347,000	5,503,304
Crisfield	460,844	.....
Oxford	182,572	264,023
St. Michael's	200,000	250,210
Total	5,851,016	6,560,340

This table shows an increase at Baltimore, Cambridge, Oxford and St. Michael's and a decrease at Annapolis. The aggregate gain is 709,324 bushels. There are no returns from Crisfield, the measurer having resigned because of his inability to enforce the law.

PUBLIC ROADS.

In almost every department of advanced agriculture the American farmer is far in the lead; but though well informed about the advantages of good highways and country roads, he, for some occult reason, fails to see that whatever makes communication easy and inexpensive adds much to the wealth of all engaged in tilling the soil.

Immigrants who settle in portions of the country where roads receive little or no attention, soon become restive and frequently move. In their native countries, though these immigrants received little pay or rations, and work like beasts of burden, they had the best of roads, for their masters, the capitalists, fully appreciate good means of communication, and the roads in many parts of Europe are far better than even the best streets of many American cities.

To have first-class roads it is necessary to give the subject of road-making the same attention and study other important matters receive. There are good books on the subject, but students of this branch of industry must not suppose that all sorts of roads require similar treatment.

The very first requisite of a good road is perfect drainage. The road should be of good width, say at least thirty feet wide for a country road, and forty would be better, with wide and deep ditches on both sides. If the land is low the centre of the road bed should be under-drained, and under-drains should also be beneath each ditch. The water should have a free escape from the ditches.

The centre of the road should be raised and gradually sloped to the ditches. The surface matter of the road bed should be such as will not wash off easily during heavy rains. Clay and sand mixed well make a good road bed in some sections, and oyster shells and sand in others. Where rock is plentiful and labor cheap that, of course, makes the best of all road beds.

Maryland certainly has not a public road system of which her citizens can be proud. Unfortunately, indeed, the roads in many of the counties are such as to make us heartily ashamed. That this is so is neither agreeable to read nor to contemplate, but it is simply a plain statement of fact to which none can enter a denial. Even under a bad system, however, the amount of money annually expended on them is amply sufficient to secure far better results if

it were more carefully and judiciously applied. There are many reasons why it is not, not the least of which is the incompetency of the men to whose immediate supervision the making and repairing of roads is given. Where there is one good and competent road supervisor there are several incompetent ones, showing conclusively that one of the chief needs, in order to get upon a proper basis, is more uniformity and less individuality. The entire management of the county roads is placed in the hands of the Boards of County Commissioners. They appropriate all sums of money, have absolute control as to the modes of expenditure, and appoint the road supervisors. The incompetency on the part of the latter to perform the duties assigned them is, without doubt, in many instances due to carelessness on the part of the appointing power; but it must not be supposed that this is always the case, as it is frequently a difficult matter to select men who are in all respects qualified. The chief fault is, without doubt, in the system that has obtained for so many years not only in Maryland, but in nearly all the States.

Why such a system has remained in force for so many years under the very noses of the people in intelligent communities is one of those things which is almost impossible of explanation. There has been an utter lack of appreciation of the great benefit of good roads that seems almost incredible. It does not seem ever to have occurred to people who are of necessity almost daily upon the public highways that their proper equipment and maintenance are among the very first essentials of individual and aggregate success. In those sections of the State particularly where immigration is so greatly needed it has not been realized that good roads are one of the chief attractions, indeed the chief attraction, to the good settler. They are more important than good lands, for a man will almost certainly turn his back on a farm, however great its advantages may otherwise be, if the means of ingress and egress are deficient. It is equally true that where the farming lands are far from being of the highest order, proper system of public highways will enhance their value almost beyond calculation.

A farmer cannot be said to have fully produced an article until that article is set down in the market where it is to be sold. Naturally, therefore, one of the most important considerations for him is its transportation to that market at a minimum cost. This being true, it inevitably follows that any permanent improvements in the roads connecting his farm with the towns must be of incalculable benefit to him. His inability to reach the market during a large portion of the year, owing to the bad condition of the roads, practic-

ally closes his chief source of income and causes great loss and waste, which can only be avoided by the building of roads that will not be affected by the changes of weather or by floods. The only period during the year when the roads may be said to be in even a fair condition is during parts of the summer season, and even then heavy rains are likely to be as disastrous to the farmer as the floods and frosts of winter. But it is in the summer that his energies can be best exerted on the farm, and any time lost then cannot be again recovered. So he is placed at the great disadvantage of being obliged to go to market, not at the time when he can obtain the best prices for his produce, but only when the roads will admit of his doing so. All his competitors laboring under the same disadvantages, the result is that all arrive at the same time, causing a glut int he market, and, of course, a very considerable loss, if, indeed, he does not lose the whole crop. These features of the farmer's life, and others which these only suggest as the result of our inferior road system, are certainly sufficient to cause a sentiment in favor of an improvement in this regard.

Nor is the farmer the only loser by the bad roads The merchant who handles his produce, as well as the one who sells to the farmer, the railroad which is called upon to carry extraordinary amounts at certain times and very small quantities at others, the consumer—in fact, all are affected to a greater or less degree.

The dealer who handles the produce of the farmer is affected in much the same manner as the farmer himself, for when a glut in the market occurs as a result of so many farmers being ready to sell at the same time, the dealer's profits are quite likely to be considerably reduced. The merchant, whose trade includes the agriculturst, is also at a serious loss on account of the inability of the latter to purchase to the same extent as he would were he to obtain good prices for his own productions.

The railroad would also be undeniably in a better position to handle the farm products were the roads in such a condition as to enable farmers to deliver them at regular periods. At present immense quantities arrive at inopportune times, which results in extraordinary expense to the railroad and involves the employment of extra help for short periods and the displacement of the labor for longer periods; whereas if the roads were always in good condition a continuous business could be maintained and constant employment assured to the railway employes. The consumer is a loser in that he is unable to obtain the farm products that he needs at times desired, unless exorbitant prices are paid. So it is seen that the road

question is one that interests persons within a very wide circle, not only in a general way, but directly and materially. Everywhere the country road is the first step which the products of the earth must take from growth to consumption or employment in the great industrial establishments of the cities. And aside from this, good roads would bring country people closer together and destroy that isolation which is such a marked characteristic of country life.

The methods to be employed to secure the best results in road-making can hardly be said to be agreed upon by all. Like nearly all questions involving the expenditure of money and the raising of taxation, a wide diversity of opinion exists as to the best system of road-making. About all, however, who have given the subject the consideration it deserves agree that the present method is defective.

The two best known, most serviceable and durable roads are probably the Macadam and Telford.

The Telford road consists of a course of broken stone set on edge to the depth of six or eight inches. Upon this foundation pike stones are spread, and the surface of the road is made of these stones, finely broken, covered with gravel, and should be well rolled. The total depth of the road bed should be about twelve inches.

The Macadam road has no edged stone foundation. It should consist of a deep bed of coarse pike stones. This should be covered with fine stone or gravel and also rolled. An abundance of stone and rock may be found in many parts of Maryland, and would be particularly available for this purpose. Though somewhat more expensive than other kinds of road, the superior results reached amply justify the additional cost. Another available material for road beds is found in the oyster shell. These may readily be obtained in large quantities and at low rates, especially where the roads are convenient to rail or water facilities.

In all parts of the State there are at least 15,000 miles of roads, fully two-thirds of which should be reconstructed. The best estimates obtainable appear to indicate that the cost of Macadam or Telford road thirty feet wide would be $4,000 a mile. The thought of such a vast expenditure may at first seem out of the question, and it is really not necessary, for it is only the main roads, which are most extensively used, that should be so generally metalled. Cross roads and those not used to so great an extent as the main roads could be graveled on each side and metalled in the middle only. This would reduce the cost to perhaps $2,500 a mile, or even less. This plan, however, would require an expenditure of $25,000,000; but, though this sum is great, yet the result would doubtless

be such as to place Maryland in the enviable position of having the best public roads in the United States.

In contemplating the expenditure of such an enormous sum of money, the question at once arises as to the agencies to be employed to carry on the work projected. It is safe to assume that no considerable number of persons would be willing to place this or any other amount at the disposal of those who have shown such poor results from an annual expenditure of a half million dollars. Too much dissatisfaction has already been expressed about the present management to suggest such a thing. A commission, to be made up of persons well qualified for the direction of such improvements, has been suggested, and other plans may be brought forward if the work should be undertaken on this basis. This phase of the question may well be dismissed, however, for the present. One of the propositions advanced by those interested directly is to divide each election district into separate road districts with a supervisor over each, all to be responsible to a general road supervisor. These sub-supervisors would be required to supply themselves with implements for road-mending and to have charge of the roads in their respective districts. It has been further proposed that those persons be employed to mend the roads who are most interested in them—that is, those living in the immediate vicinity. In opposition to the latter part of the proposal it is stated by some that farmers cannot be relied upon to work upon the roads when it is most needed, and that the better way would be to divide the district into seven or eight parts and put one good man over each section. This person could afford to provide the tools and materials for the proper maintenance of the roads, and by the employment of regular hands could do twice as much work as with the employment of green hands. This plan has been tried in at least one section of the State and has proved very satisfactory to those interested.

Still another plan is that which involves a general system of road-making to be undertaken by the State. The features of this plan are, briefly, that a competent civil engineer be employed at a liberal salary, who shall have entire control of the work and held responsible for it. He would be expected to employ competent men who thoroughly understand the business of road-making. This plan certainly appeals to the business sense of all, as it would doubtless result in a systematic improvement under proper direction. Its chief objection, if indeed it may be so called, is the large expenditure it entails. This might not be considered insuperable if the compensating advantages are fully realized. It is strikingly evident

that road-making is a science that requires to be dealt with in a scientific method if any permanent, good results are to follow.

Those who have been foremost in the agitation for good roads were instrumental in having a bill introduced into Congress during the last session which proposed to create a National Highway Commission, to be composed of two Senators and five members of the House of Representatives, whose duty would be to make a general inquiry into the condition of highways in the United States and means for their improvement, and especially the method of securing a proper exhibit at the World's Fair of approved appliances for road-making and of providing for public instruction in the art during the Exposition. Though this bill was never finally passed, yet the Senate passed it and it was favorably reported in the House of Representatives. It is proposed to renew the request for the passage of this bill during the present Congress, and even though that body refuses to grant the request, it is likely that some sort of an exhibit will be made independent of Congress. The advocates of good roads expect to present a comprehensive exhibit of all that is known of scientific road-building, which will serve as an object lesson to the great number of visitors to the Fair. Sample sections of the best road construction in this country and in Europe will be shown, while skilled workmen will be actually engaged in constructing sections of the various kinds of roads, the most expensive and the cheapest as well. Competent engineers and machinists will be in attendance for the purpose of explaining all the processes involved in the making of roads. It is expected that such an exhibit will arouse a national interest which will culminate in a decided improvement in our public road system. In this connection it is gratifying to see Maryland keeping pace with the general movement for better roads. Much discussion has been already had on the subject, and an interest has been aroused that was scarcely thought to be possible. This agitation will be kept up during the year, and until the meeting of the next General Assembly, with a view to influencing that body to enact some suitable legislation on the subject.

The following table shows the various sums levied for public roads and bridges. These figures are from official sources, having been furnished by the clerks to the County Commissioners in the twenty-three counties of the State. It has been impossible to secure the information as specifically as was desired. In some instances no answers were returned to direct questions asked, and in others no record was kept.

Table showing the amount expended in 1892 by the various Counties of the State on Public Roads and Bridges, the miles of road and the number of Supervisors, and the average mileage of Supervisors.

Counties.	Roads—New.	Roads—Repairing	Roads—Total.	Bridges.	Total Roads and Bridges.	Miles of Roads.	Number of Supervisors	Average Mileage of Supervisors.
Allegany	.....	.....	.....	.....	$ 40,000.00	.....	.....	.....
Anne Arundel	.....	.....	$ 33,889.63	$ 6,155.00	40,044.63	750	30	25.0
Baltimore	.....	.....	107,834.40	26,958.60	134,793.00	1,000	13	76.9
Calvert	.....	.....	4,000.00	600.00	4,600.00	225	3	75.0
Caroline	$ 1,000	$ 8,000.00	9,000.00	4,653.61	13,653.61	550	38	14.5
Carroll	.....	.....	14,824.73	8,580.99	23,405.72	875	350	2.5
Cecil	.....	24,157.32	24,157.32	12,277.33	36,434.65	700	350	2.0
Charles	.....	.....	8,000.00	.....	8,000.00	....	5	.....
Dorchester	.....	.....	12,971.07	.....	12,971.07	700	140	5.0
Frederick	.....	.....	21,572.66	5,000.00	26,572.66	1,250	356	3.3
Garrett	.....	.....	8,250.00	1,289.46	9,539.46	.....	145	.....
Harford	2,562.86	31,000.00	33,562.86	25,654.14	59,217.00	.....	5	.....
Howard	.....	.....	7,300.00	3,000.00	10,300.00	600	9	66.6
Kent	.....	.....	17,647.34	8,405.00	26,052.34	525	116	4.5
Montgomery	.....	.....	.....	.....	22,500.00	800	260	3.0
Prince George's	.....	.....	13,789.84	5,000.00	18,789.84	.....	21	.....
Queen Anne's	.....	.....	11,359.00	3,215.00	14,574.00	800	188	4.2
St. Mary's	.....	.....	4,926.52	.....	4,926.52	.....	.....	.....
Somerset	.....	.....	6,000.00	3,000.00	9,000.00	.....	12	.....
Talbot	2,000.00	10,000.00	12,000.00	2,382.50	14,382.50	400	107	3.5
Washington	.....	.....	10,000.00	3,000.00	13,000.00	625	300	2.1
Wicomico	1,474.25	3,109.66	4,583.91	1,056.54	5,640.45	.....	27	.....
Worcester	.....	.....	.....	.....	3,000.00	1,000	17	58.8
Total	$7,037.11	$76,266 98	$365,669.28	$120,228.17	$551,397.45	10,800	2,462	

For instance, it will be noticed that in only four counties, viz., Caroline, Harford, Talbot and Wicomico, is a separation made so as to show the amounts paid for new roads and for the repairs to old ones. In all the others only the total amount expended is stated. Either this information is not in the records of the County Commissioner's office or the clerks failed to see the importance of such a separation. It will also be seen that no specific amount is stated as having been expended for bridges in Charles, Dorchester, Montgomery, or St. Mary's counties, although the amount so expended is doubtless included in the column headed "Total Roads and Bridges." So what may appear to be a discrepancy between that column and the total of the two preceding columns is owing to a failure of the clerks to make sufficiently specific returns. Thus we find that the total amount expended for roads and bridges was $551,397.45, yet the sum of the two preceding columns is $65,500 less.

The table also shows but 10,800 miles of road, while the best authorities agree that there are at least 15,000. Neither Charles, Garrett, Harford, Montgomery, St. Mary's, Somerset nor Wicomico make any returns, while many of those making returns have only given estimates based entirely on their own judgment. This cannot be avoided, as there has been no survey in many of the counties for a considerable period. For the same reason the average number of miles worked by each supervisor cannot be given in all cases. Although repeated efforts have been made, no returns have been obtained from Allegany county, save the total expenditure for roads and bridges. This is the only county in the State that has failed to honor my request.

Baltimore county stands at the head of the list in the amount expended for roads, $107,834 being the sum reported. Anne Arundel, Harford, Cecil, Frederick, Kent and Carroll counties follow in the order named.

Worcester county, according to the returns, shows the lowest expenditure for this purpose, only $3,000 having been spent on both roads and bridges. Calvert and Wicomico counties are only slightly in advance of Worcester, $4,000 and $4,583.91, respectively, being expended for roads in those counties. In Calvert county $600 is occasionally spent for bridges; but how often this expenditure is made is not reported. As to the expenditures on bridges, Baltimore county again takes the lead with $26,958.60, with Harford county very close behind.

The largest number of supervisors is reported from Frederick,

which may be accounted for by the fact that that county reports the greatest number of miles of roads.

Most of the counties have certain regulations which are local in their character and show the lack of any general system of road improvement.

In Anne Arundel county, for instance, there are three trustees to each road district, and one supervisor working under their jurisdiction. The hands employed are furnished by the county. There are thirty road districts in the county and the supervisors are paid $2 a day when they are supervising six hands, and when less than six hands are employed they receive a *pro rata* amount of $2 based on the number employed.

In Baltimore county 80 per cent. of the amount levied is set aside as a special road fund, and is divided among the thirteen road districts in proportion to their taxable basis. The balance, or 20 per cent, is held as a general road fund, and is used for bridges in the several districts in the same proportion as is the special road fund. The only exception to this rule is when it becomes necessary to build some large bridges in small districts. In this case the amount necessary is used regardless of the taxable basis of the district. Of the 80 per cent. known as the special road fund, the law requires that three-fourths of the amount be expended for hard material. The road supervisors, thirteen in number, are paid by no fixed method, but according to the judgment of the Board of County Commissioners, one of them receiving as high as $1,200 per annum, while others receive no more than $250. Each supervisor's jurisdiction ends with the boundaries of his own district, and he is required to make full reports of his operations to the County Commissioners. The latter pay all bills which they consider just.

Calvert county has three road commissioners, one for each election district, and they are elected by districts every two years. These commissioners appoint annually one supervisor for each district who co-operates with the commissioners in the supervision of the roads. Each supervisor is paid $35 a month, with extra compensation for teams. The supervisors also employ five laborers each at a salary of $26 a month. The commissioners are paid $1.50 each a day when actually engaged in office. The time fixed by law for work on public roads is from April 1 to October 15. Before the first day in April next succeeding their election the commissioners and the road supervisor of each district are required to ride over and inspect the public roads in their respective districts, and the commissioners are required to instruct the supervisors as to the

manner in which the roads shall be repaired, when they are to be widened, and the order of time in which the work is to be done. The road supervisors are required to make true returns, accompanied by affidavit, as to the number of hours each laborer is engaged on the work, as well as a statement of the number of hours he has been absent himself, and the reasons therefor. When his accounts are audited and approved by the road commissioners, an order is given him on the collector of taxes for his election district, from whom he receives the amount necessary to defray the expense. The County Commissioners have only the authority, however, to levy to the extent of four thousand dollars.

The County Commissioners of Caroline county require that all work upon public roads shall be done between the 20th day of April and the 20th day of July, unless the necessity of the case shall require otherwise, and all accounts for work so done shall show the name of the person performing the same, and the time at which the work is done must be specifically stated. Ploughing must be done in the month of April, and no allowance will be made for ploughing roads unless the dirt is removed to the centre.

In Carroll county the County Commissioners annually appoint three road commissioners who have full control of the construction and repair of the public roads and the small bridges not costing over one hundred dollars in their respective districts. They also have power to fix the rate of a special tax to be levied, not to exceed the sum of twenty cents on every hundred dollars valuation, which fund shall be kept for the purpose of repairing and constructing roads and bridges and for no other purpose. Each of the road commissioners receives for his services $2.50 a day, though none are permitted to receive more than $50 in any one year. The law does not contemplate any abridgment of the powers of the County Commissioners to re-survey or lay out new roads, and any disagreement that may arise as to the duties of the road commissioners must be submitted for adjudication to the County Commisssoners, whose decision shall be final.

The nine election districts of Cecil county are divided into three road districts, with one County Commissioner in charge of each. The custom is to place a section of from one to three miles of road in the hands of a farmer, living along the line of the road, for repairs. He is allowed $1.50 a day for his own services, $1.25 for each hand he may employ, and $3.50 per day for each two-horse team, including the wages of the driver. This places the whole system under the direct supervision of the County Commissioners. In addition to the sums

stated in the table, $3,080.08 were expended for sundry items not directly chargeable to roads and bridges, though necessary to their maintenance, such as the purchase of road machines, the maintaining of ferry, and the salaries of bridge tenders, etc.

Charles county is divided into four collection districts, and there is a supervisor for each district, and one additional supervisor who goes wherever his services are most needed. Each supervisor is allowed five regular hands and a team of horses and all necessary implements. No machinery is used. A road machine was purchased by the County Commissioners at a cost of $150; but after using it a short time it was abandoned, as having, in the estimation of the Commissioners, no value. The road supervisors receive $250 a year each, and the hands are paid $1 a day. Work on the public roads commences about the 15th of April and continues until November 1. The supervisors make monthly reports to the County Commissioners, and are paid by their order in cash.

Charles county is considered by many people to have the best road system in the State. The general condition of the roads there is at most all times good, and during the past year some very excellent work has been done. Greater care is taken now to select men of good judgment for supervisors, and though there are still some incompetent ones appointed, they understand, in the main, their business, and this fact, together with the improved system in operation, has brought the roads to a much higher standard than they at one time had. Under past county administrations it was a common thing to appoint negro supervisors, and as a result the roads were often in a deplorable condition. It is largely owing to this fact that the roads are not in better condition at this time, as they have not even yet recovered from the effects of mismanagement. Until 1886 Charles county levied $10,000 annually for its roads; since that time the annual levy has been $8,000, which seems to be sufficient for the work.

The public roads in Dorchester county are under the general supervision of the County Commissioners, though 140 road supervisors have direct control of the work. These supervisors are paid $1 per day for ten days only, though they are allowed to do extra work, for which they are paid. Detailed statements are returned annually, showing the amount paid to each supervisor, as well as the amounts paid to each person from whom materials were purchased. This statement also includes the amount paid for labor, together with the name of each recipient.

The present Board of County Commissioners of Frederick county,

upon their induction into office, decided to apportion and assign the various districts of the county to the supervision of the members of the board, giving to each member, as nearly as possible, the section in which he lived. The mileage of roads, as well as the number of supervisors under the control of each Commissioner, is nearly equal, and the wisdom of adopting this course of superintendence has been made manifest from the beneficial results which have followed the change. The average mileage to each supervisor is about three and one-third miles, as shown by the table, though some few have as high as eight or nine miles under their control, while others have only one mile or even less—in fact, the arrangement is made with due consideration for the capacity and ability of each to work his portion. They are allowed $12 a mile, but very often extra expenditures are allowed when the appropriation fails to meet the requirements. For example, in 1892 the levy was $19,847.66, yet there was $1,725 paid out as an extra allowance. The Commissioners are favorably impressed with the use of road machines and several different styles are in operation. In addition to the regular levy for roads, an annual levy of $5,000 is made and is designated as a "Road and Bridge Levy." This fund is used to meet the expense of repairing bridges and culverts, as well as cutting down hills and such work of that character. It has nothing to do with the regular road fund. In the appointment of supervisors the custom is to select them from among the direct taxpayers and their tax bills are settled from their account against the county.

Garrett county has no regularly adopted road system. There are 145 road supervisors, who are paid $1.50 for each day they work. Each supervisor is allowed five men, and they are paid $1.25 a day when the supervisors file their account with the County Commissioners. This account is a full statement of the work done, including the name of each man, the work he has done, the time he has made and the amount he receives.

Harford county is divided into five road districts and each district has a general road supervisor appointed by the County Commissioners. The supervisors have control of the building and repairing of roads and appoint sub-supervisors who work the roads under the supervisors' direction. The supervisor approves all accounts for work done, and they are then forwarded to the County Commissioners, upon whose order they are settled and a copy retained in the office.

Howard county has nine road superintendents who present their bills for all work done to the County Commissioners, by whom they are examined and passed upon. The Commissioners give orders on the

collectors of taxes for the amounts, the collectors returning these orders as vouchers for so much taxes paid. All new roads are opened by contract, and the cost levied for the coming year. The wooden bridge work is generally given out by contract, and paid for out of the regular levy for bridges. Iron bridges are built under the supervision of civil engineers and the expense is met by special levy. The condition of some of the public roads of Howard is above the average.

The County Commissioners of Kent county appoint 116 supervisors, whose duty it is to employ a sufficient number of hands to properly do the work laid out. They are paid by orders on the County Treasurer, though the payments are only made in January, succeeding the levy in July. This provision is according to the legal enactments on the subject. The total amount levied is given in the table, though it is divided as follows: $13,173.34 for general purposes, including material and drain pipe for bridges; $674 for costs and damages for new roads and landings; $3,800 to keep them in repair; $5,650 for three new iron bridges, and filling in abutments; $470 to pay bridge keepers; $285 on Chester bridge bonds $2,000 to the commissioners of Chestertown as their proportion of entire levy for roads and bridges, save the expense of Chester bridge, which latter is borne jointly by Kent and Queen Anne's counties, as is also the expense of the Crumpton and Millington bridges. The roads are mostly worked by road machines, road plows and scoops, and the number of miles given to each supervisor varies, some having but one mile under their control while others have several.

Montgomery county expends annually in the ordinary repairs of roads about $18,000, which also includes the building and repair of small bridges. This latter cost, however, does not xceed $30 or $40. Since 1882 there has also been an annual levy of $4,500, which is proportioned to each of the five collection districts, to be used in permanent improvement by macadamizing, etc. There is a commission from each of the five collection districts, and the roads in these districts are laid off into road districts by the commissioner from each collection district. The County Commissioners make a contract with each supervisor to expend a certain amount in repair of roads under his supervision. The supervisors are paid by the clerk to the Board of County Commissioners by an order on the collector of taxes for the amount of taxes due, and by draft for the balance.

Prince George's is divided into road districts not exceeding fourteen, for each of which they appointed one or more road

supervisors. These have charge of all work except such bridges as the Commissioners may deem it advisable to build or repair by contract. The supervisors are required to give bond, subject to the approval of the Commissioners, for the proper performance of duties, the return of all property in their charge, and the proper disposal of monies coming into their hands. There is also a district road commission, appointed by the County Commissioners, to serve without compensation, and whose duty it is to make a monthly written report to the County Commissioners as to the condition of the roads and bridges, and the work under the supervisors, of their respective districts. The Commissioners levy a tax on the assessable property of the county to carry out the provisions of the law. All large bridges are put out by contract. Cash payments are made for all work done when the bills are presented and approved.

The system in Queen Anne's county provides for the appointment of 188 supervisors of public roads for five of the districts, while two of the districts are worked by general supervisors. All bills for work performed and for materials, etc., are paid by orders on the collectors of taxes for each district, which orders are given by the clerk to the County Commissioners after the account has been approved by the county court. The supervisors have no specified number of miles of road to work.

The County Commissioners of Somerset county appoint such a number of supervisors as to give to each not less than fifteen nor more than thirty miles of road; but whenever, in their discretion, any election district shall have not more than sixty miles of road they may appoint one supervisor for the district. The supervisors hold office for two years, and are subject to removal by the Commissioners for incompetency, neglect or misdemeanor. All able-bodied men between twenty-one and fifty-five years of age are compelled to labor on the roads. The supervisors may summon such persons as they deem necessary. Each person is liable to work sixteen hours on roads in each year. The road supervisors may make such commutation of labor for teams as they deem proper. Any person summoned by the supervisors may furnish a substitute or pay the supervisor $1 a day. A special tax of four cents on the $100 is provided for, to be used for the betterment of public roads and the purchase of road machines.

In St. Mary's county the usual appropriation for roads is $3,000, though the expense attendant upon the work usually exceeds this amount. In 1892 the excess amounted to $1,926.52, making the

total levy $4,926.52, as shown by the table. The Commissioners have the right to levy $5,000. The system in this county is to appoint supervisors, who are usually farmers, and they use their own team and implements in repairing the roads. They are allowed $1 a day for a team and $1.50 for their own services. Each man employed to work on the roads is paid $1 a day. The system has not proved at all satisfactory and a movement is on foot to establish a better one.

The people of Talbot county claim to have the best roads in the State. The act of 1870 placed the full control of the roads in the hands of the County Commissioners and they appoint the supervisors, each of whom has about three miles and a-half of road under his direction. All bills for work done must be sworn to by the supervisors, and when so presented are paid in cash. There is no specified sum set by law to be levied each year, and for the past three years the expenditures have ranged from $9,500 to nearly $12,000. There are but few laws relating to the system in this county excepting those prohibiting the littering of the road by throwing brush, limbs, etc., thereon. No portable saw mill is permitted within seventy-five feet of any public road.

Washington county expends $13,000 annually on its public roads. In this expenditure is included the opening of drains, keeping up breakers and breaking stone to put in the road beds. For a number of years stone has been delivered free of charge to the County Commissioners by persons living along the roads, and the county has to pay only for the breaking of the stone. In some sections of the county the public roads are piked entirely in this way. A road scraper is used in some places to raise the road bed. Laborers on the public roads are paid $1 a day. No road is allowed to be constructed between any dwelling house and spring or well used for family purposes, nor to pass through any buildings, yards, garden, burial ground or orchard without consent of the owner. The supervisors are directed to erect notices or finger boards at cross roads and to keep a correct account of the expenses of erecting them. It is not lawful for any person to encroach upon or obstruct the county roads of Washington county. The County Commissioners have power to construct any road, to be opened for the use of the public, less than thirty feet wide; provided, that in the judgment of the examiners such width will be sufficient for the public use.

The County Commissioners of Wicomico county subdivide each of the election districts into road districts and place a supervisor in

charge of each such road district. All able-bodied male citizens between twenty-one and fifty years of age, who do not live in an incorporated town, are required to work not less than two days on the public roads in the district in which they live, though no person is required to work more than four miles from his residence. Substitutes may be provided, however, at $1 a day. The road supervisors are required to give bond for the faithful performance of their duties, though the County Commissioners have sole power to fix the compensation of any laborers on the roads and to authorize their employment. All public roads hereafter to be opened in the county must be thirty feet wide, unless the County Commissioners may deem it necessary to have them of greater or less width. The County Commissioners have also the right to make at any time such rules and regulations as they may deem necessary, which does not conflict with the general law.

In Worcester county the sub-division of the election districts into road districts was also done by direction of the County Commissioners, but by an act of 1890 all road legislation was repealed and no other enactment has been substituted. Of the $3,000 appropriated for public roads, $1,179.50 was paid to the seventeen supervisors by an order of the County Commissioners on the treasurer.

RAILROAD STATISTICS.

For reasons set forth in the preceding pages of this report, I have limited my inquiry as to transportation statistics wholly to railroads. Any attempt to go further than this would have been a vast work, entailing a great expenditure of money and time. The tables presented will, I think, be found to contain many things that will be useful and interesting to the public. The scope of the inquiry is as wide as it seemed possible or desirable to make it at this time. With very few exceptions, all the railroad companies courteously complied with my request for information.

There are operating in whole or in part within the State of Maryland twenty-four railroads. These are the Baltimore & Ohio, the Pennsylvania System, which includes the Northern Central, Baltimore & Potomac, Philadelphia, Wilmington & Baltimore, Frederick & Pennsylvania, Philadelphia & Baltimore Central, Cambridge & Seaford, Newark & Delaware City, Delaware, Maryland & Virginia, Queen Anne & Kent, Delaware & Chesapeake, (the last six being included in the Delaware Division of the P. W. & B.), Annapolis, Washington & Baltimore, Annapolis & Baltimore Short Line, West Virginia Central & Pittsburg, Cumberland Valley, Baltimore & Eastern Shore, New York, Philadelphia & Norfolk, Western Maryland, Cumberland & Pennsylvania, George's Creek & Cumberland, Norfolk & Western, Baltimore & Delaware Bay, Baltimore & Lehigh and Southern Maryland.

The total mileage of these roads, within the State, is 1,289.44, and the total mileage of the roads reporting, 1,111.99, or 177.45 miles less than the whole.

The roads from which no returns were received are the Annapolis & Baltimore Short Line, which refused to make any; the George's Creek & Cumberland, which is operated by the Maryland and American Coal Companies at New York, and which, having no system of accounts showing the statistical information usually desired, it has not been customary to include it in such reports; the Cumberland & Pennsylvania, which is operated by the Consolidation Coal Company, and which keeps

no separate accounts; and the Southern Maryland, which is in a moribund condition, and in regard to which no inquiry was made.

Statistics are not given separately for all of the roads of the Pennsylvania system, for the reason that the Baltimore & Potomac, and all the branches of the Maryland and Delaware division of the Philadelphia, Wilmington & Baltimore, are included in the figures for that system. The Northern Central and the Frederick & Pennsylvania accounts are kept separately.

As the operations of nearly all the roads embraced in this investigation extend beyond the State, the only way in which it was possible to secure statistics for the State of Maryland alone was by pro-rating on the mileage basis—that is, by crediting to the State of Maryland such part of the entire business of the road as the miles of road within the State bear to the total mileage. This is as close an approximation as it is possible to make, and is the method adopted by all statistical bureaus under similar conditions. All returns are made for the fiscal year ending June 30, 1892, except those of the West Virginia Central & Pittsburg and the Piedmont & Cumberland, which could only be obtained for the last six months of that period.

The following statement from Poor's Manual shows the liabilities and assets of Maryland railroads for 1892, the excess of assets being $21,569,452. It is necessary to explain in this connection that where railroads run through two or more States it is customary to credit the statistics of such road to that State of which it is a recognized corporation. For instance, the capital stock, etc., of the Baltimore & Ohio, which is partly in the State of West Virginia, is credited to Maryland, whereas other roads partly within the State of Maryland, but which are recognized corporations of another State, are omitted, and credited to the State in which they are domiciled.

Liabilities.		
Capital stock	$ 54,950,146	
Bonded debt	100,581,317	
Unfunded debt	6,077,101	
Current accounts	8,267,673	
Total liabilities		$169,876,237
Assets.		
Cost of railroads and equipment	$112,347,873	
Real estate	70,018,646	
Other assets	4,982,891	
Current accounts	4,096,279	
Total assets		191,445,689
Excess of assets		$21,569,452

Table No. 1 shows the earnings in the freight and passenger departments of the railroads reporting. The total receipts from passengers amounted to $3,873,154.59; from express and baggage, $308,594.09; from mail, $264,189.55; from other sources, $216,223.55. The three latter items are included in the receipts of the passenger department, making a total of $4,662,161.78.

In the freight department the receipts are divided as follows: From freight carried, $6,765,726.51; from other sources, $192,955.23, or a total earning of $6,958,681.74. The combined earnings in both freight and passenger departments are $11,620,843.52.

TABLE NO. 1—*Showing the earnings in Passenger and Freight Departments of the railroads operating in Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	PASSENGER DEPARTMENT.					FREIGHT DEPARTMENT.			PASSENGER AND FREIGHT DEPARTMENTS.
	From Passengers.	From Express and Baggage.	From Mail.	From other sources	Total Earnings Passenger Department.	From Freight Carried.	From other sources.	Total Earnings Freight Department.	Total Earnings.
Baltimore & Ohio	$1,071,898.36	$115,008.15	$ 88,905.72	$ 28,329.26	$1,304,141.49	$3,104,858.03	$113,308.14	$3,218,166.17	$4,522,307.66
Penna. System (P., W. & B.)	1,783,661.27	115,412.54	104,268.10	109,650.40	2,112,992.31	1,699,043.81	.....	1,699,043.81	3,812,036.12
Penna. System (North'n Central.)	334,373.45	29,292.24	15,469.28	23,738.66	402,873.63	936,470.71	40,872.13	977,342.84	1,380,216.47
Penna. System (Fred'k & Penna.)	19,668.68	2,010.00	2,096.40	1,047.84	24,822.92	33,349.76	.....	33,349.76	58,172.68
Baltimore & Eastern Shore	69,068.62	1,864.83	1,982.82	484.17	73,400.44	38,026.90	.....	38,026.90	111,427.34
Western Maryland	314,725.65	21,585.38	27,562.25	36,512.04	400,385.32	371,737.90	17,198.74	388,936.64	789,321.96
N. Y., Phila. & Norfolk	98,690.78	8,927.16	13,781.46	8,049.77	129,449.17	251,974.46	11,883.48	263,857.94	393,307.11
Baltimore and Lehigh	44,433.58	2,669.89	2,591.59	8,241.38	57,936.44	47,728.04	1,264.40	48,992.44	106,928.88
Baltimore & Delaware Bay	5,467.14	367.98	1,372.10	.....	7,207.22	22,820.10	.....	22,820.10	30,027.32
Annapolis, Wash'n & Baltimore	49,949.63	4,286.60	1,852.12	136.00	56,224.35	11,495.17	.....	11,495.17	67,719.52
*Piedmont & Cumberland	6,054.55	634.78	583 34	26.31	7,298.98	67,445.18	44.09	67,489.27	74,788.25
*W. Va. Central & Pittsburg	2,530.22	162.97	181.23	7.72	2,882.14	10,916.70	2,975.43	13,892.13	16,774.27
Cumberland Valley	50,912.37	4,600.06	2,081.19	.....	57,593.62	82,818.74	3,470.64	86,289.38	143,883.00
Norfolk & Western	21,720.29	1,771.51	1,461.95	.....	24,953.75	87,041.01	1,938.18	88,979.19	113,932.94
Total	$3,873,154.59	$308,594.09	$264,189.55	$216,223.55	$4,662,161.78	$6,765,726.51	$192,955.23	$6,958,681.74	$11,620,843.52

*For 6 months only.

Table No. 2 shows the operating expenses and taxes of the roads reporting. The largest item of expense was conducting transportation, which aggregated $4,439,297.90. The cost of maintenance of way and buildings was $1,691,043.93; for maintaining motive power and cars, $1,864,184.48; general expenses, $704,999.83; taxes, $143,730.55, or a total expenditure of $8,843,256.69. With regard to the item of taxes, it will be seen that four roads make no report. In explanation of this, the taxes paid by the Northern Central are included in the operating expenses, and those of the Western Maryland in general expenses. The Baltimore & Eastern Shore is exempt from taxation, and the Piedmont & Cumberland, which is operated by the West Virginia Central & Pittsburg Railroad Company, paid no taxes during the six months for which its returns were made.

TABLE No. 2—*Showing operating expenses and taxes of Railroads operating in Maryland, for year ending June 30, 1892.*

NAME OF RAILROAD.	Maintenance of way and buildings.	Maintenance of motive power and cars.	Conducting transportation.	General expenses.	Taxes.	Total Expenses.
Baltimore & Ohio	$ 556,561.60	$ 627,378.43	$1,741,102.46	$ 294,484.83	$ 74,577.72	$3,294,105.04
Pennsylvania System. Phila., Wilmingt'n & Balto.	677,235.79	423,296.40	1,480,813.43	226,424.29	50,979.37	2,858,749.28
Pennsylvania System. Northern Central	158,194.16	528,649.94	536,665.20	16,897.56	....	1,240,397.86
Pennsylvania System. Frederick & Pennsylvania..	25,185.34	13,592.35	20,430.49	.....	1,515.00	60,723.18
Baltimore & Eastern Shore	23,876.88	32,254.29	28,601.55	† 33,763.48	.....	118,496.20
Western Maryland	101,421.60	75,085.88	301,600.57	58,144.70	.....	536,252.75
New York, Philadelphia & Norfolk	54,556.02	50,342.02	165,044.74	32,419.21	6,298.67	308,660.66
Baltimore & Lehigh	20,890,38	34,687.15	25,550.37	13,528.02	3,688.77	98,344.69
Baltimore & Delaware Bay	16,052.78	1,111.80	19,434.26	1,288.64	380.78	38,268.26
Annapolis, Washington & Baltimore	7,988.13	3,232.03	24,180.92	5,675.37	1,745.67	42,822.12
*Piedmont & Cumberland	13,365.66	7,028.08	18,817.83	5,159.03	.....	44,370.60
*West Virginia, Central & Pittsburg	4,466.71	1,260 79	4,005.21	896.12	400.00	11,028.83
Cumberland Valley	21,477.77	54,772.15	31,373.54	4,771.51	1,985.90	114,380.87
Norfolk & Western	9,771.11	11,502.17	41,677.33	11,547.07	2,158.67	76,656.35
Total	$1,691,043.93	$1,864,184.48	$4,439,297.90	$ 704,999.83	$ 143,730.55	$8,843,256.69

* For 6 months only.

† For ferry service, no report for "general expenses."

Table No. 3 shows the passenger traffic of the roads reporting. The total number of passengers carried was 9,677,461. The number of passengers carried per mile, 187,970,483. This indicates that the average number of miles traveled by each person was slightly over nineteen. The average earnings, expense and gain or loss per passenger per mile is shown for each road reporting. The Western Maryland keeps no separate account of these items and consequently no showing is made for that road in this particular.

TABLE No. 3—*Showing the Passenger Traffic of the Railroads operating in Maryland for the year ending June 30, 1892.*

NAME OF RAILROAD.	Number of passengers carried.	Number of passengers carried one mile.	Average earning per mile per passenger.	Average expense per mile per passenger.	Gain or loss per mile per passenger.
Baltimore & Ohio	1,861,572	59,054,656	$ .02224	$ .01746	$ .00478
Pennsylvania System. Phila., Wilmingt'n & Balto.	4,576,003	86,149,151	.02070	.01830	.00240
Pennsylvania System. Northern Central,	1,886,619	16,257,590	.02057	.02061	‡ .00004
Pennsylvania System. Frederick & Pennsylvania	67,244	811,884	.02422	.03691	‡ .01269
Baltimore & Eastern Shore	151,563	3,283,333	.02635	.02100	.00535
Western Maryland	686,644	12,811,710	.01700	†	†
New York, Philadelphia & Norfolk	99,309	3,886,653	.02539	.02556	‡ .00017
Baltimore & Lehigh	153,926	1,887,932	.02366	.02601	‡ .00235
Baltimore & Delaware Bay	13,492	337,300	.03000	.04000	‡ .01000
*Piedmont & Cumberland	20,337	213,189	.03420	.03100	.00320
*West Virginia, Central & Pittsburg	5,558	86,754	.03320	.03100	.00220
Cumberland Valley	130,643	2,313,461	.02200	.02100	.00100
Norfolk & Western	24,551	876,870	.02477	.01897	.00580
Total	9,677,461	187,970,483			

* For six months only. ‡ Loss. † No record kept.

Table No. 4 shows the freight traffic of the roads reporting. The total number of tons of freight carried was 9,237,192. The number of tons carried one mile was 822,976,793, which shows that each ton was carried about eighty-eight miles. The average rate a ton per mile is also shown.

TABLE NO. 4—*Showing the Freight Traffic of Railroads operating in Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	Number of tons of freight carried.	Total tons of freight carried one mile.	Average rate per ton per mile for freight.
Baltimore & Ohio	2,754,300	476,593,837	$ .00651
Pennsylvania System. Philadelphia, Wilmington & Baltimore.	2,122,742	119,863,898	.01417
Pennsylvania System. Northern Central	2,480,994	144,141,954	.00650
Pennsylvania System. Frederick & Pennsylvania	104,376	1,777,448	.01876
Baltimore & Eastern Shore	51,193	1,222,707	.03100
Western Maryland	496,881	19,461,409	.01400
New York, Philadelphia & Norfolk	228,451	22,946,394	.01037
Baltimore & Lehigh	43,417	1,270,747	.03736
Baltimore & Delaware Bay	32,492	812,399	.04000
*Piedmont & Cumberland	528,853	10,846,780	.00620
*West Virginia, Central & Pittsburg	168,148	1,412,443	.00770
Cumberland Valley	151,863	6,641,412	.01245
Norfolk & Western	73,482	15,985,365	.00545
Total	9,237,192	822,976,793	

*For six months only.

Tables 5, 6, 7, 8 and 9, show the number of employes, the average monthly or daily wages, as the case may be, and the number of hours employed a day. It will be noticed that there is a great disparity between the wages paid by different roads to persons who, from their classification, it would seem are employed in the same class of work, yet it should be borne in mind that different roads exact widely different service, which fact doubtless accounts for the differences in compensation.

TABLE No. 5—*Showing the number, monthly wages and hours of work of the General Officers and Clerical Force of Railroads in Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	GENERAL OFFICERS.			DIVISION SUPERINTENDENT.			CIVIL ENGINEERS.			MASTER MECHANICS.			ROAD MASTERS.			CLERKS.		
	No.	Average Monthly Wages.	Hours per day.	No.	Average Monthly Wages.	Hours per day.	No.	Average Monthly Wages.	Hours per day.	No.	Average Monthly Wages.	Hours per day.	No.	Average Monthly Wages.	Hours per day.	No.	Average Monthly Wages.	Hours per day.
Baltimore & Ohio	21	488.17	8													237	$ 57.11	8
Penna System — Phila., Wil. & Balto.	3	328.44		2	196.33		8	$ 84.72		1	$ 76.35		6	$ 95.74		142	53.02	8
Penna System — Northern Central	10	294.50		7	92.15		4	135.00		19	90.00		246	57.75				
Penna System — Frederick & Penna.				1	54.00								1	36.00		1	45.00	
Baltimore & Eastern Shore	2	125.00								1	70.00	10	1	30.00	10	5	35.00	10
Western Maryland	6	319.45					1	175.00		1	150.00		1	150.00		35	47.00	
N. Y., Phila., & Norfolk	2	133.33					1	45.00		1	125.00		1	90.00		28	52.65	
Baltimore & Lehigh	3	188.88	10							1	110.00	10	1	75.00	10	13	30.00	10
Baltimore & Delaware Bay	1	125.00	10										1	65.00	10	1	75.00	10
Annapolis, Washington & Balto	2	179.16								1	95.00	10	1	75.00	10	2	36.25	10
*Piedmont & Cumberland... *West Va., Central & Pitts...	8	159.26	9				2	100.59	12							48	31.52	9
Cumberland Valley	1	250.00	9													3	72.00	9
Norfolk & Western	1	400.00														6	55.00	
Total.	60			3			19			10			32			767		
Average monthly wages...		$ 249.27			$125.16			$ 99.49			$108.76			$ 78.53			$ 49.79	
Average hours of work...			9						12			10			10			9

* For six months only.

TABLE No. 6—*Showing the number, daily wages and hours of work of persons employed in the Passenger Service of Railroads operating in Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	CONDUCTORS.			BRAKEMEN.			BAGGAGEMEN.			ENGINEERS.			FIREMEN.		
	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.
†Baltimore & Ohio	133	$ 2.84	.....	‡318	$ 1.82	.....	.....	.....	.....	170	$ 3.76	.....	179	$ 1.96	.....
Penna. System. Phila., Wil. & Balto	52	3.57	.....	61	1.94	.....	63	$ 1.95	.....	64	4.09	.....	55	2.24	.....
Penna. System. Northern Central	14	3.43	.....	18	1.70	.....	10	2.15	.....	11	4.21	.....	11	2.11	.....
Penna. System. Frederick & Penna.	2	3.00	.....	2	1.50	.....	2	1.50	.....	2	4.00	.....	2	1.60	.....
Baltimore & Eastern Shore	2	3.00	10	1	1.50	10	2	1.25	10	5	3.00	10	5	1.25	10
†Western Maryland	17	2.75	.....	‡34	1.83	.....	.....	.....	.....	35	2.73	.....	37	1.30	.....
New York, Phila. & Norfolk	3	4.00	.....	4	2.00	.....	1	1.60	.....	4	4.50	.....	3	2.80	.....
Baltimore & Lehigh	6	2.45	10	8	1.50	10	4	1.50	10	7	2.65	10	7	1.40	10
†Baltimore & Delaware Bay	1	2.40	7	3	1.50	7	1	1.00	7	1	2.40	7	1	1.50	7
Annapolis, Wash. & Baltimore	2	3.85	10	2	1.78	.....	1	1.95	.....	2	3.55	10	2	2.20	10
*Piedmont & Cumberland / *West Va., Cen. & Pittsburg	3	4.00	9	3	1.82	9	3	1.76	9	3	4.00	9	3	2.09	9
†Cumberland Valley	4	3.00	.....	‡10	1.50	.....	.....	.....	.....	5	3.40	.....	5	1.60	.....
†Norfolk & Western	4	2.40	.....	‡12	1.16	.....	.....	.....	.....	5	3.13	.....	5	1.52	.....
Total	243	.....	.....	476	.....	.....	87	.....	.....	314	.....	.....	315	.....	.....
Average daily wages	.....	$ 3.13	.....	.....	$ 1.66	.....	.....	$ 1.47	.....	.....	$ 3.49	.....	.....	$ 1.81	.....
Average hours of work	.....	.....	9	.....	.....	9	.....	.....	9	.....	.....	9	.....	.....	9

* For 6 months only. † Including freight and yard employes. ‡ Including baggagemen.

TABLE No. 7—*Showing the number, daily wages and hours of work of the Freight and Yard Employes and Machinists of the Railroads operating in Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	FREIGHT AND YARD EMPLOYES.												MACHINISTS.			WIPERS.		
	CONDUCTORS.			ENGINEERS.			FIREMEN.			BRAKEMEN.								
	No.	Wages.	Hours per day	No.	Wages.	Hours per day	No.	Wages.	Hours per day	No.	Wages.	Hours per day	No.	Daily Wages.	Hours per day	No.	Daily Wages.	Hours per day
†Baltimore & Ohio	...	...	...	...	...	...	...	...	...	...	...	...	103	$2.00	...	...	...	...
Penna. System. Phila., Wil. & Balto.	54	$3.59	...	55	$4.14	...	62	$2.00	...	203	$2.20	...	87	2.39	...	40	$1.32	...
Penna. System. Northern Central	75	2.95	...	58	3.70	...	60	1.80	...	130	1.76	...	91	1.90	...	...	...	...
Penna. System. Frederick & Penna.	2	1.90	...	...	2.00	...	2	1.00	...	6	1.20	...	...	...	...	1	1.50	8
Baltimore & Eastern Shore	3	3.00	10	2	3.00	10	2	1.30	10	11	1.25	10	...	...	...	...	...	...
†Western Maryland	...	...	...	...	...	...	...	...	...	...	...	...	14	2.21	10	...	...	...
N. Y., Phila. & Norfolk	12	4.00	...	11	4.00	...	11	2.50	...	42	1.80	...	4	2.50	...	4	1.25	...
Baltimore & Lehigh	2	2.20	10	2	2.50	10	2	1.60	10	4	1.70	10	9	2.10	...	9	1.20	10
†Baltimore & Delaware Bay	...	...	...	...	...	...	...	...	...	...	...	...	1	2.40	...	...	...	...
Annapolis, Washington & Balto.	...	...	...	...	...	...	...	...	...	...	...	...	1	2.50	...	...	...	...
*Piedmont & Cumberland *West Virginia Cen. & Pitts	10	2.89	...	9	3.64	...	9	1.60	...	25	1.92	...	2	2.40	10	4	1.30	10
†Cumberland Valley	...	...	...	...	...	...	...	...	...	...	...	...	4	2.30	...	...	...	...
†Norfolk & Western	...	...	...	...	...	...	...	...	...	...	...	...	2	2.18	...	...	...	...
Total	158	...	...	137	...	...	148	...	...	421	...	...	318	...	...	58	...	...
Average Daily Wages	...	$2.98	...	...	$3.28	...	...	$1.69	...	...	$1.69	...	...	$2.26	...	...	$1.31	...
Average Hours of Work	...	...	10	...	...	10	...	...	10	...	...	10	...	...	10	...	...	9

* For six months only.

† Included in passenger department.

TABLE No. 8—*Showing the number, daily wages and hours of work of Station Agents, Telegraph Operators, Carpenters and Section Foremen of the railroads of Maryland, for year ending June 30, 1892.*

NAME OF RAILROAD.	STATION AGENTS, NOT TELEGRAPH OPERATORS.			STATION AGENTS, ALSO TELEGRAPH OPERATORS.			TELEGRAPH OPERATORS, NOT STATION AGENTS.			CARPENTERS.			SECTION FOREMEN.		
	No.	Daily Wages	Hours per day.	No.	Daily Wages	Hours per day.	No.	Daily Wages	Hours per day.	No.	Daily Wages	Hours per day.	No.	Daily Wages	Hours per day.
Baltimore & Ohio	75	$1.42	.....	151	$1.57	10	105	$1.66	.....	235	$1.79	8	110	$1.95	.....
Penna. System — P. W. & B.	‡98	1.97	.....	.....	.....	.....	113	1.67	.....	109	2.44	.....	65	2.05	.....
Penna. System — North'n Central.	‡50	2.00	.....	.....	.....	.....	49	1.95	.....	.....	.....	.....	21	1.95	10
Penna. System — Fred'k & Penna.	3	1.67	8	4	1.83	10	2	1.35	10	.....	.....	.....	5	1.73	10
Balto. & Eastern Shore	7	1.20	.....	16	1.70	.....	2	1.60	.....	6	1.70	.....	13	1.40	.....
Western Maryland	‡53	1.00	10	.....	.....	.....	21	1.40	12	7	2.10	.....	24	1.50	10
N. Y., Phila. & Norfolk	9	1.25	.....	9	1.00	.....	8	1.35	.....	9	2.00	.....	9	1.45	.....
Baltimore & Lehigh	24	1.00	.....	18	1.10	.....	.....	.....	.....	4	2.00	10	16	1.60	10
Balto. & Delaware Bay	2	80	5	6	1.25	10	.....	.....	.....	1	1.50	10	3	1.80	10
Annapolis, Wash. & Balto.	3	90	.....	.....	.....	.....	.....	.....	.....	1	2.10	.....	3	1.30	.....
*Piedmont&Cumberl'd. *W. Va. Cen. & Pittsb'g	5	1.00	12	4	1.20	12	2	1.10	12	6	2.00	10	7	2.50	10
Cumberland Valley	8	2.00	10	27	1.75	10	1	3.00	10	8	2.00	10	5	2.00	10
Norfolk & Western	3	1.78	.....	10	1.42	.....	4	1.82	.....	4	1.66	.....	3	1.52	.....
Total	340	.....	.....	245	.....	.....	307	.....	.....	390	.....	.....	284	.....	.....
Average daily wages	.....	$1.38	.....	.....	$1.42	.....	.....	$1.69	.....	.....	$1.94	.....	.....	$1.75	.....
Average hours of work	.....	.....	9	.....	.....	10	.....	.....	11	.....	.....	10	.....	.....	10

* For 6 months only. ‡ Including "Station Agents, also Telegraph Operators."

TABLE NO. 9—*Showing the number, daily wages and hours of work of Sectionmen, Watchmen, Bridge Tenders and Pumpmen, Painters, Traveling Passenger Agents, and other Employes of the Railroads of Maryland for year ending June 30, 1892.*

NAME OF RAILROAD.	SECTIONMEN.			WATCHMEN.			BRIDGE TENDERS AND PUMPMEN.			PAINTERS.			TRAVELING PASSENGER AGENTS.			OTHER EMPLOYES.		
	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.	No.	Daily Wages.	Hours per day.
Baltimore & Ohio	636	$1.16	.....	550	$1.70	.....	...	.....	.....	...	.....	.....	...	.....	.....	852	$1.52	.....
Penna. System. Phila., Wil. & Balto.	610	1.25	.....	169	1.25	.....	24	$1.64	.....	45	$2.00	.....	...	.....	.....	887	1.72	.....
Penna. System. Northern Central	270	1.15	.....	63	1.35	.....	...	.....	.....	40	1.90	10	...	.....	.....	735	1.55	10
Penna. System. Frederick & Penna.	28	1.09	10	...	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	5	.65	8
Baltimore & Eastern Shore	63	1.20	10	8	1.20	.....	4	1.60	10	...	.....	.....	...	.....	.....	...	.....	.....
Western Maryland	170	1.20	10	17	1.10	.....	...	.....	.....	...	.....	.....	...	.....	.....	143	1.50	10
N. Y., Phila. & Norfolk	60	1.20	.....	4	1.15	.....	2	1.10	.....	1	1.50	.....	1	$3.80	.....	122	1.35	.....
Baltimore & Lehigh	57	1.20	10	...	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	11	1.50	10
Baltimore & Delaware Bay	6	1.30	10	1	1.60	.....	...	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....
Annapolis, Washington & Balto	.....	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	...	.....	.....	22	1.25	10
*Piedmont & Cumberland... *West Virginia, Cen. & Pitts.	45	1.50	10	2	2.00	12	...	.....	.....	2	1.50	.....	1	5.00	10	16	1.70	.....
Cumberland Valley	35	1.50	10	4	1.25	.....	...	.....	.....	...	.....	.....	...	.....	.....	6	1.40	10
Norfolk & Western	37	.97	.....	4	1.11	.....	...	.....	.....	...	.....	.....	...	.....	.....	5	1.07	.....
Total	2017	.....	.....	822	.....	.....	30	.....	.....	88	.....	.....	2	.....	.....	2804	.....	.....
Average daily wages	.....	$1.23	.....	...	$1.36	.....	...	$1.45	.....	...	$1.72	.....	...	$4.40	.....	.....	$1.36	.....
Average hours of work	.....	.....	10	...	.....	12	...	.....	10	...	.....	10	...	.....	10	.....	.....	10

* For six months only.

In Table No. 10 is presented a summary or recapitulation of the five preceding tables. The total number of employes of each class is given, together with the number of roads from whose officers reports have been received in relation thereto. This table also shows the average number of hours of employment of each class of employes, the highest and lowest wages paid, either monthly or daily, as the case may be, and the average wages received by each class of employes, taking all the roads reporting into consideration.

TABLE 10—*Showing number of employes, hours of work and average daily wages of the railroads operating in Maryland for year ending June 30, 1892.*

	Number of Employes Reported.	Number of Railroads Reporting.	Average No. of Hours Worked Per Day.	Lowest and Highest Rate of Wages Paid.	Average Wages
				(Monthly.)	(Per month.)
General officers	60	12	9	$125.00 to $488.17	$249.27
Division superintendents	3	2	.....	54.00 " 196.33	125.16
Civil engineers	19	5	12	45.00 " 175.00	99.49
Master mechanics	10	7	10	70.00 " 150.00	108.76
Road masters	32	9	10	30.00 " 150.00	78.53
Clerks	767	13	9	30.00 " 75.00	49.79
				(Daily.)	(Daily.)
Passenger conductors	243	13	9	2.40 to 4.00	$3.13
Passenger brakemen	476	13	9	1.16 " 2.00	1.66
Passenger baggagemen	87	9	9	1.00 " 2.15	1.47
Passenger engineers	314	13	9	2.73 " 4.50	3.49
Passenger firemen	315	13	9	1.25 " 2.80	1.81
Freight and yard conductors	158	7	10	1.90 " 4.00	2.98
Freight and yard engineers	137	7	10	2.00 " 4.14	3.28
Freight and yard firemen	148	7	10	1.00 " 2.50	1.69
Freight and yard brakemen	421	7	10	1.20 " 2.20	1.69
Machinists	318	11	10	1.90 " 2.50	2.26
Wipers	58	5	9	1.20 " 1.50	1.31
Station agents, not telegraph operators.	340	13	9	80 " 2.00	1.38
Station agents, also telegraph operators.	245	9	10	1.00 " 1.83	1.42
Telegraph operators, not station agents.	307	10	11	1.10 " 3.00	1.69
Carpenters	390	11	10	1.50 " 2.44	1.94
Section foremen	284	13	10	1.30 " 2.50	1.75
Sectionmen	2,017	12	10	97 " 1.50	1.23
Watchmen	822	10	12	1.10 " 2.00	1.36
Bridge tenders and pumpmen	30	3	10	1.10 " 1.64	1.45
Painters	88	4	10	1.50 " 2.00	1.72
Traveling passenger agents	2	2	10	3.80 " 5.00	4.40
Other employes	2,804	11	10	65 " 1.72	1.36
Total	10,895				

Table No. 11 shows the number of persons killed or injured on such roads as have reported, and whether their injuries were the result of their own negligence or from causes beyond their control. It will be seen that but six passengers were killed in all; three from their own carelessness and three from causes beyond their control. Forty-one employes were reported killed in all; thirty-four from their own carelessness and seven from causes beyond their control. Sixty-eight persons other than passengers and employes were reported killed in all; fifty-eight from their own carelessness and ten from causes beyond their control.

Of those injured fifty were passengers, 381 were employes and ninety were other persons. Of this number 321 received their injuries as a result of their own carelessness, while 200 were injured from causes beyond their control.

TABLE No. 11—*Showing the number of persons Killed or Injured by Accident on the Railroads for 1892, and whether such accidents resulted from their own carelessness or from causes beyond their control.*

NAME OF RAILROAD.	KILLED.						INJURED.					
	From causes beyond their control.			From their own carlessness.			From causes beyond their control.			From their own carlessness.		
	Passengers	Employes.	Others.	Passengers.	Employes.	Others.	Passengers.	Employes.	Others.	Passengers.	Employes.	Others.
Baltimore & Ohio	1	2	3	1	14	28	3	20	6	14	91	15
Penna. System. Phila., Wil. & Balto.	1	3	7	2	7	17	16	60	24	8	29	12
Penna. System. Northern Central					8	8	2	47	10	6	108	14
Penna. System. Frederick & Penna.						1		9				1
Western Maryland	1				5	3	1				11	1
N. Y., Phila. & Norfolk						1						6
Baltimore & Lehigh		1										
Baltimore & Delaware Bay											1	
*Piedmont & Cumberland								2			2	
Cumberland Valley											1	
Norfolk & Western		1										1
	3	7	10	3	34	58	22	138	40	28	243	50

* For six months only.

CHILD LABOR.

The employment of children in factories and workshops has for many years been the subject of much comment throughout the country. The question has been debated in the labor organizations, has been the inspiration of many sermons from the pulpit, has many times been discussed in the editorials of the public press—in a word, has been one of the most generally debated subjects now before the public. And yet, despite all the discussion, there is not any generally accepted theory for the prevention of the employment of children at an age when it would be better for them to be at school or at play. Nearly all admit that it is dangerous in a country enjoying universal suffrage, where the intelligence of the country is reflected in the legislation enacted, to have a generation growing up without that school training which appears to be necessary to insure good citizenship.

In view of these admitted facts, it is not surprising that the Knights of Labor of the State should desire and request an examination into the question. This request was in answer to the following letter sent to Mr. J. G. Schonfarber, Master Workman of District Assembly 41, K. of L.:

BUREAU OF INDUSTRIAL STATISTICS,

BALTIMORE, May 17th, 1892.

MY DEAR SIR—In order to facilitate my work in collecting the labor statistics of the State, and to secure the best possible results, I am anxious to place myself in communication with the labor organizations. I realize fully the magnitude and importance of this work, and have no other desire than to give as thorough and faithful attention to it as circumstances and the limited means at hand will allow. It is through you, as the head of the central organization, that I hope to reach the local organizations, and to secure a general interest and co-operation. The law requires me "to collect statistics concerning and examine into the condition of labor in this State, with special reference to wages and the causes of strikes and disagreements between employers and employes." What I may be able to

accomplish will depend very largely upon the assistance that I will secure through you. Will you be kind enough to give this matter your attention at your earliest convenience, and let me hear from you? I am sure that organized labor will gladly respond to all properly directed efforts from this office, and I cordially invite any and all suggestions you may be able to make, as I desire to work largely on the lines which will be productive of the best results for those most nearly interested. The section of the law which I have quoted you gives you only a general idea of the work which it is proposed to do, but will enable you readily to see what a large field is to be covered if it is properly done. Very truly yours,

A. B. HOWARD, JR.,
Chief of Bureau.

A similar letter was sent to Mr. George R. Heath, as President of the Federation of Labor, an organization very much like the Knights of Labor in its objects, though differing in its methods. The Federation of Labor paid no attention whatever to my communication.

The Knights of Labor, on the contrary, discussed my letter for several weeks with a view, so I am informed, of arriving at a conclusion that would be at once satisfactory to all its members and the public generally and sent the following answer:

BALTIMORE, August 6th, 1892.

MR. ALLEN B. HOWARD, JR.,
Chief Bureau of Industrial Statistics:

DEAR SIR—I am directed by District Assembly 41, Knights of Labor, to inform you that it is the sense of that body that an investigation into "Child labor in this city and State, its effect on wages, morals and adult workers," would be of interest not alone to the members of organized labor, but to the public generally.

Thanking you for having given us an opportunity to express our preference in this matter, I am, truly yours,

J. G. SCHONFARBER,
Master Workman, District Assembly 41, *K. of L.*

Accordingly I entered upon the investigation, not without, however, a proper appreciation of the magnitude of the work involved. I selected from among the numerous business houses

in Baltimore city and vicinity the names of those firms whose business necessitated the employment of children and submitted to them a series of questions designed to elicit the information desired. Attention was exclusively given to the employment of children under sixteen years of age, as it is this class about whom so much complaint has been heard.

In many of the factories visited the proprietors informed the agent of the Bureau that it was their rule to employ no children under the age mentioned, and if any such were employed it was without their knowledge or consent. They stated, and it is doubtless true, that when children became acquainted with the rule they were liable, in their anxiety to secure employment, to misrepresent their age; but this of course the employers were not responsible for and could not guard against. A personal inspection of the factories and work rooms by the agent led him to believe there were some children at work below the age, judging entirely from appearances; but these, especially in the case of female children, are very apt to be misleading.

In the factories visited there was evident on all sides a disposition on the part of the employer to secure as much bodily comfort and safety as was consistent with the character of the employment in which the children were engaged. There was in no factory visited any of the harrowing sights to be seen that have been so vividly described by a number of publications as being characteristic of similar factories in the larger cities. In fact, one firm at least established a boarding house for its female employes, and the comforts of this house are closely akin to those of the best regulated homes, and far superior to those of many of our poorer population.

An especial effort was made to comply with the request of that part of the letter from the Knights of Labor regarding the effect of the employment of children upon the wages of adults. But nothing specifically can be shown in this line, as it is evident that the employment of children bears a certain ratio to the use of new machinery. For example, a number of adult workers may be employed at a certain branch of industry, and a machine is invented which will do the work very much quicker, and the dispensing with the adult worker becomes a necessity; for if one employer does not take advantage of a labor-saving device, his competitor will, and thereby places the former at a disadvantage from which he cannot recover without the use of the same instrumentalities. The introduction of a machine very often will enable the manufacturer to employ a mere child to

attend it. As this appears to be the history of most of the labor-saving devices, it will be seen at a glance that what displaces this particular labor is not the child employed, but the machine. Those not employed directly by the machine are usually employed as a result of the invention which more minutely subdivides the labor formerly done throughout by one person. At all events, the experience of this Bureau does not differ from that of some others in this country of the same character, and that is, that it is impossible to accurately determine whether or not the child supplanted an adult, and if so, whether the wages of the child ere lower or higher, and to what extent. It is plainly apparent, however, that there is little if any direct displacement of adult labor, but the employment of children has followed closely upon the introduction of new machinery and improved processes of production.

Apart from these considerations, it cannot be denied that it is a sad sight to see children, especially those of the weaker sex, hurrying each morning to work in the factory, there to continue for ten hours of unremitting labor (save the hour for lunch). The mere fact that there are a number of children in our community who are forced to this extremity, through the necessities of themselves and those dependent either wholly or in part upon them, is indeed a grave question. No senseless and intemperate assaults upon the employers of the children, however, can avail as a remedial agent, for they as individuals are no more responsible for the conditions that exist than are any other class of citizens. Parents, as a rule, will not send their children out to work unless the fruits of their labor is in urgent demand.

One of the first difficulties met with in the visits to the manufactories employing children was the inability to secure accurate information as to the ages of the children. The employers, in the first place, consider themselves under no obligation to give the information, and even when they are willing to do so, they have to rely on the statements of those who believe that their employment can only continue upon condition that they are at least a certain age. With this condition of affairs in mind I have attempted in another way to ascertain the number approximately at least. There are 305,197 persons in this State between the ages of five and eighteen years. As the whole population of Baltimore is about 42 per cent. of the whole population of the State, so by taking 42 per cent. of the school population we approximately arrive at the school population of the city of Baltimore, which is, on this basis, 128,182. During the year 1890, there were

65,758 pupils that attended the public schools, though but 50,899 were on the rolls December 31 of that year. Of this number, 932 were between the ages of five and six years; 4,484 between six and seven; 5,802 between seven and eight; 6,106 between eight and nine; 6,414 between nine and ten; 6,403 between ten and eleven; 5,443 between eleven and twelve; 5,277 between twelve and thirteen; 4,130 between thirteen and fourteen; 2,939 between fourteen and fifteen; 1,603 between fifteen and sixteen; 855 between sixteen and seventeen; 346 between seventeen and eighteen.

It will be seen from these figures that less than one-half of the school population is attending the public schools in the city of Baltimore. It would be a liberal estimate to state that the private schools accommodate one-third the number of pupils who are attending the public schools, which would increase the number receiving a school training 16,911, or a total of 67,645, which is not quite 53 per cent. of those of a school age.

The total number who attended the public schools during 1891 was 66,836, though but 52,543 were on the roll December 31 of that year. Of the former number 52,339 were under sixteen years of age, divided as follows: Between five and six years, 901; six and seven, 4,625; seven and eight, 6,143; eight and nine, 6,604; nine and ten, 6,437; ten and eleven, 6,815; eleven and twelve, 5,892; twelve and thirteen, 5,192; thirteen and fourteen, 4,297; fourteen and fifteen, 2,804; fifteen and sixteen, 1,629; sixteen and seventeen, 835; seventeen and eighteen, 447. These figures show that the children begin to leave school at about twelve years of age, until we find that there are but 1,629 children between fifteen and sixteen years of age remaining, as compared with 5,892 between eleven and twelve years. The same results, practically, are shown from the figures of 1890. It is fair to assume that the balance of the children of a school age are either on the streets or at work. Exactly what the proportion is it seems impossible for this Bureau to determine without increasing its authority and resources; for, as I have before stated, the returns from the factories are entirely inadequate for the purpose of drawing any fair inferences.

This absence of school training is painfully apparent in conversation with the children who are at work; for, although nearly all can read and write, yet the latter very useful accomplishment is a very laborious process for many of them. Very many are without a knowledge of the merest rudiments of a common school education. Illiteracy prevails to a considerable extent, a number admitting that they have never read a book of any description.

Many attempts have been made by the various States to regulate or restrict the employment of children. Massachusetts, for example, requires all persons or corporations employing children to file a certificate furnished by each child employed, which certificate will show at a glance the date of the child's birth, the town, county, State or country where it was born, the height, complexion and color of eyes and hair. These certificates are sworn to by parents or guardians.

Other States have passed similar laws to that in force in Massachusetts, and in New York the law gives the factory inspectors the authority to prohibit the employment of children who are, in their judgment, below the age defined.

California, Rhode Island and Vermont prohibit the employment of children under ten years of age. The two latter also require that the child shall have had at least twelve weeks tuition in some school, public or private.

Illinois, Indiana, Kansas, Maine, Michigan, Missouri, New Jersey, Ohio, Tennessee, West Virginia and Wyoming set the age limit at twelve years; but in Illinois, Iowa, Kansas, Missouri, Tennessee and Wyoming this restriction applies only to those to be employed in mines.

Illinois and New Jersey require that the child shall have at least twelve weeks schooling, and Michigan, Maine and Ohio require at least sixteen weeks tuition.

Many of the European countries have also enacted legislation designed to protect the children who would be likely to be sent out to work, and have set the age limit as follows: Austria and Switzerland, 14 years; England and Russia, 15 years; Sweden, Germany and Holland, 12 years; Spain and Denmark, 10 years, and Italy, 9 years.

The only law bearing upon the subject now on the statutes of this State is the act approved April 7, 1892, and is as follows:

Be it enacted by the General Assembly of Maryland, That sections one hundred and thirty-nine to one hundred and forty-one, inclusive, of article twenty-seven of the Code of Public General Laws, title "Crimes and Punishments," sub-title, "Health, Hours of Labor of Children," be and the same are hereby repealed and re-enacted so as to read as follows:

139. No child under sixteen years of age shall be employed in laboring more than ten hours a day in any manufacturing business or factory established in any part of the State, or in any mercantile business in the city of Baltimore.

140. Any person who shall so employ a child or suffer or permit such employment is guilty of a misdemeanor.

141. The words "suffer or permit" includes every act or omission whereby it becomes possible for the chiid to engage in such labor.

Sec. 2. And be it enacted that this act shall take effect from the date of its passage.

The only essential difference between the present law and the one which it repealed is that the present one includes mercantile establishments, which were not included in the provisions of the old enactment.

The principle underlying all of this legislation is evidently fallacious, for the intent is to prevent the employer from giving employment to persons who are anxious to go to work for him. Under a strong centralized government involving minute inspection and close surveillance, such laws may be strictly enforced; but in democratic communities any attempt to enforce them results in deceit and falsehood. For, as the earnings of the children are necessary to the support of the family, the mother or father will misrepresent the ages of the children in order to secure their employment. In fact, the evidence is given in other States that parents have taken false affidavits to enable their children to help support the family. So it will be seen that child labor, under present circumstances, is unavoidable, and the most that can be done is to insist upon cleanly, well-ventilated workshops and factories, reasonable precaution against accidents and fires, and such other arrangements as will tend to lessen the hardships which of necessity exist. It is in States where factory inspectors are employed that such laws are most generally enforced. These inspectors are especially charged to enforce the law, and wherever authority is given them the evils complained of have been considerably lessened.

It is almost impossible to consider the question of child labor without some reference to the education of the child. It would be manifestly absurd to prevent children from going into a workshop only to leave them on the street. The State has ample facilities for the education of the children, and it is very generally admitted that every citizen's usefulness is increased by a scholastic training. The sentiment is very general that education of the young should be as extensive as possible, though there is some diversity of opinion as to the best means to bring it about. Compulsory education by law is somewhat repugnant to our institutions, though it may be said that many who usually hesitate at extending the functions of government, favor some enactment which would result in a more general attendance at the

public and private schools. Others contend that the education of a child is a purely parental function and should not be encroached upon. They also assert that if the principle be admitted that the State should educate the child, it must also be admitted that the State may go into its religious training and also decide the extent of the training of either kind to be given. In defence of the proposition to make education compulsory, though the right of the parent to educate the child is conceded, it is claimed that it is also a duty that the parent owes the State, and when he fails to perform this duty the State may, with propriety, take the matter into its own hands.

That this latter feeling is widespread may be judged from the fact that twenty-eight States and Territories have adopted compulsory education laws. They are as follows: California, Colorado, Connecticut, District of Columbia, Idaho, Illinois, Kansas, Massachusetts, Maine, Michigan, Minnesota, Montana, Nebraska, Nevada, New York, New Jersey, New Hampshire, New Mexico, North Dakota, Ohio, Oregon, Rhode Island, South Dakota, Utah, Vermont, Washington, Wisconsin and Wyoming. That the laws in these States are not fully carried out is owing to the requirement that the school directors shall see to their enforcement, and their reluctance to offend any one permits numberless evasions. Where special officers are appointed to enfore the laws much better results follow.

The necessity for the manual training of children has also come to be more generally considered, and, as a result, no less than thirty States have established technical instruction as a part of their system of education. The institution of these schools was doubtless hastened by the wonderful increase in labor-saving devices and the consequent subdivision of labor, which precludes the possibility of an apprentice learning more than a very small part of any trade. The Manual Training School of Baltimore had three hundred and seventy pupils on the rolls December 31, 1891, and fifteen teachers. The usual academic course is supplemented by a course of tool instruction, including carpentry, wood-carving, wood-turning, pattern making, moulding, soldering, brazing, vise and machine shop work, printing, care and management of steam engines and boilers, and military drill. Mechanical engineering is also a part of the course.

While I have shown approximately the number of children employed at an early age, it may not be inappropriate to give the result of my attempt to secure the information from the factories, if for no other reason than to illustrate the futility, under

existing circumstances, of any effort to secure accurate information from this source. Schedules were sent to upwards of one hundred establishments, which employ a large number of children; but many of them replied that no children under sixteen years of age were employed, while many declared their inability or unwillingness to fill the schedules out. The questions asked, as already given on page 20, were as to the number of children employed, sex, age, wages, hours of labor, number of months employed, reason of employment, age at time of employment, lost time and causes, nativity of parents and total school attendance.

Many important industries have failed to answer any of these questions, and others have answered but a portion of them. If the inquiry had been directed towards ascertaining the number of women and children employed without reference to age, the task would have been much less difficult of accomplishment, as such an inquiry would not have involved the apparently insurmountable difficulty of arriving at the ages of those employed in such establishments.

The subjoined table gives all the returns that have been received by this Bureau after repeated requests and personal visitations:

Table showing the number of employes under sixteen years of age, the age at which they were employed, weekly wages, hours of labor and number of months employed during the year:

Industry.	No. of employes.	Male.	Female.	Age at time of employment.	Weekly Wages.	Hours of Labor.	No. of Months employed.
Tinware	87	65	22	*15	$3.00	10	12
Smoking Tobacco Manf'g	190	70	120	15	3.00	8 to 10	12
Drawers and Overalls	49	6	43	14	3.00	10	12
Shirts	89	19	70	15	2.60	10	12
Paper Box Making	61	13	48	15	2.50	9	12
Picture Frames	40	15	25	15	3.00	9½to10	12
Cotton Manufacturing	335	160	175	12	*3.50	10	10

*Average.

It will be seen at a glance that no idea could be formed from these returns as to the wages or other conditions of children employed in factories. It would appear from these returns that children employed in the cotton manufactories are the best paid, while those in the tobacco manufactories have the fewest hours to work. But if fuller returns could be obtained, more definite conclusions could certainly be drawn.

The following table shows the number of children employed in the cotton industry for 1880 and 1890. In each of the New England States where legislation on the subject of the employment of children has made the most important advances, a considerable decrease is shown. In 1880, 17,704 children were employed, while in 1890 but 10,165 are reported, a falling off of over 42 per cent. In the Middle States all show a decrease, save Delaware, which shows an increase of twenty-five persons, or about 13 per cent. Maryland shows a decrease of one person only.

In the Southern States an increase of 4,718 persons is shown, or about 53 per cent.

In the Western States a net decrease is shown of seventy-four persons, or 14 per cent.

These decreases in the various States may show that stringent legislation has had the effect of reducing the number of children employed, or they may indicate that the passage of such laws has had the effect of inducing interested persons to make false returns. Again it may be that neither of these surmises is correct, but that the industries in the Southern States employing children have increased. This latter is apparently partly borne out by the returns; for it is shown that while 239 establishments were distributed through these States in 1890, there were but 161 in 1880, an increase of seventy-eight establishments, or nearly 37 per cent. On the other hand, during the same period, a decrease in the number of establishments is reported from the New England States of over 9 per cent. The Middle States show an increase of 100 establishments, or about 72 per cent.

Table showing the number of children employed in the Cotton industry in 1880 and 1890, with increase and decrease.

New England States.	Children Employed.		Decrease.	Increase.
	1890.	1880.		
Maine	863	1,420	557	.....
New Hampshire	894	1,697	803	.....
Vermont	90	171	81	.....
Massachusetts	4,091	7,570	3,479	.....
Rhode Island	3,182	3,930	748	.....
Connecticut	1,045	2,916	1,871	.....
Total	10,165	17,704	7,539	.....

Middle States.	1890.	1880.	Decrease.	Increase.
New York	1,036	2,089	1,053	.....
New Jersey	413	708	295	.....
Pennsylvania	1,417	2,086	669	.....
Delaware	217	192	.....	25
Maryland	938	939	1	.....
Total.	4,021	6,014	2,018	25

Southern States.	1890.	1880.	Decrease.	Increase.
Virginia	476	281	.....	195
North Carolina	2,071	741	.....	1,330
South Carolina	2,152	585	.....	1,567
Georgia	2,460	1,411	.....	1,049
Alabama	501	433	.....	68
Mississippi	306	206	.....	100
Kentucky	178	133	.....	45
Tennessee	457	230	.....	227
All other S. States	214	77	.....	137
Total	8,815	4,097	.....	4,718

Western States.	1890.	1880.	Decrease.	Increase.
Ohio	7	37	30	.....
Indiana	235	124	.....	111
Illinois	38	.....	.....	38
Missouri	.....	181	181	.....
Wisconsin	53	.....	.....	53
All other States	98	163	65	.....
Total	431	505	276	202

The appended table shows the number of children employed in the woollen industry in 1880 and 1890. In the New England States a decrease of thirty-seven per cent. is shown from these returns. About ten per cent. decrease is shown by the returns from the Middle States, and in eight of the principal Southern States an increase of fifty-eight per cent. In five of the Western and all other States not specially mentioned, a decrease of nearly thirty-two per cent. is shown.

During the same period the establishments in the woollen industry in the New England States have increased nearly fifteen per cent.; in the Middle States the increase has been nearly twenty-three per cent., Maryland showing an increase of twenty-six per cent. The eight principal Southern States show a decrease of nearly thirty-nine per cent., while the five Western States specified, and all other States not heretofore referred to, show a decrease of over fourteen per cent.

Table showing the number of children employed in the Woollen industry in 1880 and 1890, with increase and decrease.

New England States.	Children Employed.		Increase.	Decrease.
	1890.	1880.		
Maine	150	294	.....	144
New Hampshire	300	619	.....	319
Vermont	42	148	.....	106
Massachusetts	1,842	3,281	.....	1,439
Rhode Island	1,876	1,876	.....	.....
Connecticut	583	1,432	.....	849
Total	4,793	7,650	.....	2,857

Middle States.	1890.	1880.	Increase.	Decrease.
New York	2,684	3,091	.....	407
New Jersey	336	813	.....	477
Pennsylvania	5,482	5,730	.....	248
Delaware	39	31	8	.....
Maryland	267	42	225	.....
Total	8,808	9,707	233	1,132

Southern States.	1890.	1880.	Increase.	Decrease.
Virginia	31	19	12	.....
North Carolina	84	15	69	.....
South Carolina	.....	.....	.....	.....
Georgia	101	25	76	.....
Alabama	250	.....	250	.....
Mississippi	224	46	178	.....
Kentucky	178	217	.....	39
Tennessee	124	42	82	.....
Total	992	364	667	39

Western States.	1890.	1880.	Increase.	Decrease.
Ohio	429	332	97	.....
Indiana	173	365	.....	192
Illinois	73	226	.....	153
Missouri	59	134	.....	75
Wisconsin	156	45	111	.....
All other States	174	461	.....	287
Total	1,064	1,563	208	707

These tables, bearing upon industries which employ a large number of children, are submitted as being of general interest, and may offer suggestions, if any be needed, for legislation on the subject of child labor.

With a desire of presenting all shades of opinion on the subject of the employment of children, I addressed letters to the following persons asking for their views on this subject: Cardinal Gibbons, Rt. Rev. Bishop Paret, Rev. C. R. Weld, Miss M. E. Richmond, Secretary of the Charity Organization Society; Mrs. Edward A. Robinson, President W. C. T. U., Dr. Sidney E. Sherwood, Johns Hopkins University; Dr. John Morris, Messrs. Wm. E. Hooper & Sons, Mr. James A. Gary, President of the Merchants and Manufacturers' Association; Dr. James F. McShane, Health Commissioner of Baltimore; Prof. Henry A. Wise, Superintendent of Public Instruction; Mr. J. G. Schonfarber, Master Workman of Knights of Labor; Mr. S. B. Hasson, President of the Federation of Labor; Mr. Lewis Hochheimer, counsel of the Society for the Prevention of Cruelty to Children, and Dr. R. E. L. Gould, Johns Hopkins University. Their replies are appended in the order in which they were received:

ILCHESTER, December 6, 1892.

MR. A. B. HOWARD, JR.,

Chief of Bureau of Industrial Statistics:

DEAR SIR—His Eminence begs to acknowledge the receipt of your letter, and wishes to state in reply to your inquiry that he is decidedly opposed to the employment of child labor, especially if there be a question of children of tender age, both on physical and moral grounds.

On physical grounds, because it dwarfs the growth of the child and is far from calculated to promote its health. On moral grounds, because it prevents the child from attaining the proper development of its intellectual and moral faculties. And, as civilized governments the world over are turning their serious attention to this important matter, it will be eminently fitting for our commonwealth cheerfully to take up the same and promptly to act upon it. Yours respectfully,

JAMES CARDINAL GIBBONS,
Archbishop of Baltimore.

Per J. C. HILD, C.S.S.R.,
Secretary.

JOHNS HOPKINS UNIVERSITY,
BALTIMORE, MD., December 7, 1892.

MR. A. B. HOWARD, JR.,
Chief of Bureau of Industrial Statistics:

DEAR SIR—So far as proposed legislation upon the subject of child labor is concerned, I think nothing better could be done than a careful study of the English legislation as embodied in the "Act to Consolidate and Amend the Law Relating to Factories and Workshops," passed in 1878.

The experience of England is the most valuable, because of the early and continued supremacy of her manufacturing industries, and because the benefits of thorough and well-enforced laws restricting child labor have there been best shown. But American experience cannot be neglected. It is well established that the employment of young children in factories, and under other unwholesome conditions, has been increasing in manufacturing districts in the United States. In twenty-one States prior to 1889 laws were passed attempting to deal with the evils of child labor. But the real solution of the problem as it presents itself under American conditions has not been reached.

Two provisions would seem to me necessary in any effective legislation.

First: The absolute prohibition of the employment of children under sixteen or eighteen years of age.

Second: The compulsory attendance of such children at proper public or private schools.

And I might add a third provision—namely, the public establishment of industrial and technical schools. My reasons for the recommendations might be outlined as follows:

First: The interests of the child demand such protection. It is an induction well established from long and broad experience of practical men and educators that children should be given the best possible opportunity for a general training before learning minutely the technical points of special lines of work. In the absence of real necessity, the child should be left free to choose its own occupation, free from the dictates of either parent or State. This is impossible with hard labor during his tender years, especially when that labor tends to train him to some particular mechanical skill or when it exhausts his energies and stunts his growth.

Our schools should, therefore, offer the opportunity for a complete education, manual as well as mental, in all that is necessary

as a general basis for the best special labor in adult years. It may be urged that children employed in this way in some industry acquire useful skill far more efficiently than in industrial schools, but experience plainly shows that it is not safe to entrust this training to manufacturers who have to make a profit out of the labor of the child under the press of severe competition.

Second: The interests of society demand such protection to children.

(*a*) The extensive employment of young children tends to increase the number of able-bodied adult paupers. Children displace their fathers, and the fathers are thus encouraged to neglect their families. Careful statistics show that the united earnings of a family where women and children work are substantially the same as where the father alone works.

(*b*) Hard labor during the years of growth tends to weaken the child morally, mentally and physically. Society needs the best development of the young. If under the present system parents are allowed to sell the labor of their children to employers, where the employment degrades and weakens the child, the State must remedy the evil as an act of self-preservation.

Third: The interests of the employers demand the same remedy. Under the present system they are driven by competition to employ inefficient labor, because they can get it temporarily at lower real cost. But competition drives them all down to the same low level and leaves them with a force of children to do their work, when, if the children could not be employed, they would all alike be forced to employ able-bodied men, whose real cost would in most cases be less. If this be disputed, still this much could be indisputably maintained, that it is the consumers who pay for goods, and the employer would not be compelled to curtail his profit more in the latter case than in the former. Further, most employers who have had experience of the workings of such laws approve them. Very truly yours,

SIDNEY SHERWOOD.

BALTIMORE, December 24, 1892.

A. B. HOWARD, JR., ESQ.,

Chief of Bureau of Industrial Statistics:

DEAR SIR—The effect of the employment of young children at an age which is ordinarily devoted to their education is unquestionably very bad. It is injurious to health, morals and intellect. The evil is greatest in the case of children employed in factories,

especially girls. To remedy this evil, in a measure at least, I drafted a very stringent law, so clear and precise in its terms as to leave no room for evasion. This law was passed by the Legislature in 1892, being chapter 443 of the acts of that year.

It prohibits the employment of children under sixteen years for more than ten hours in any manufacturing business or factory in any part of the State, or in any mercantile business in Baltimore. Any person who employs or suffers or permits the employment of a child contrary to this law is liable to the common law penalty for misdemeanor, fine, imprisonment, or both in the discretion of the court. The words "suffer or permit" are defined in this same act to include "every act or omission whereby it becomes possible for the child to engage in such labor."

This law goes as far as public sentiment in our State permits. The best suggestion that I can offer by way of remedy against the evils of child labor is a rigid enforcement of its provisions. Prompt information should be given to the State's attorneys or the agents of our humane societies of all violations of this law.

Very truly yours,

LEWIS HOCHHEIMER.

Prof. Henry A. Wise, Superintendent of Public Instruction of Baltimore, sends the following extract from the Ohio school law, which has been already printed in his report to the School Commissioners, as embodying his views on the subject:

"It is very important that the necessary legislation should be enacted to prevent the employment of children under fourteen years of age, and it is recommended that the necessary steps be taken to procure the passage of such a law as the following, with whatever changes may be found necessary:

"'That no child under the age of fourteen years shall be employed by any person, company or corporation during the school term, and while the public schools are in session, unless the parent, guardian, or other person having care of such child, shall be able to give substantial proof that he or she has, if the child is between eight and fourteen years of age, sent such child or children to a public, private or parochial school for a period of not less than twenty weeks in each school year, commencing September 1st, ten weeks of which shall be consecutive, unless such child or children are excused from such attendance by the school authorities of the public, private or parochial schools, on account of some disabling mental or physical condition, or that

such child or children are taught at home by some qualified person or persons, in the branches usually taught in primary schools to the extent hereinbefore mentioned; or that such child has completed the usual course of the primary and grammar grades in some public, private or parochial school, and such person, company or corporation shall demand such proof before giving employment to any minor, and shall make a record of such proof given, and shall be required, upon request of the proper authority, to allow the said record to be examined; and any person, company or corporation employing any child contrary to the provisions of this act shall be liable to a penalty of $50 for each offence, to be recovered in an action for debt, in any court or before any justice of the peace having jurisdiction, and such action shall be brought in the name of the Secretary of the Board of Education.'"

BALTIMORE, January 8, 1892.

MR. A. B. HOWARD, JR.,

Chief of Bureau of Industrial Statistics:

DEAR SIR—In reply to your very courteous request of November 17, 1892, I beg leave to thank you for the opportunity offered me as the Master Workman of the Knights of Labor of this State to express my views.

The subject of employment of children of tender years and the effect of that employment on their moral and physical growth, as well as the general effect on wages of such employment, has long engrossed the attention of members of the Knights of Labor. To such an extent has this evil grown that the organization has engrafted in its platform a demand for compulsory education and free text-books and the prohibition by the State of the employment of children under sixteen years of age.

The absolute necessity of education to assure the continued security of the republic is conceded on all sides, and the passage of semi-compulsory education laws in other States is evidence that this feeling is shared with us all over the country. Maryland's progress is dependent upon the education of the rising generation. The best citizen is the intelligent one. The best home influences emanate from intelligent mothers, wives and sisters. Conservative devolopment and progress in civilized countries is largely due to the fact that the masses of the people are capable of intelligent thought as well as action. None of these desirable things can be had if we allow the children of the

State to grow up in ignorance. We know that hardly one-half of the children of school age attend the schools of the State. Where do they go when the mind is most impressionable; when the children are most susceptible to good or bad influences; when they can be taught to reason and think logically? The answer is undoubtedly: In the workshop, factory, store or in the field. Driven there, I believe, by the conditions that surround them and the inequitable laws of taxation and distribution which deprives their natural supporters, their parents, of the opportunity of earning sufficient to support them in their childhood, while they are receiving the education which the State goes to such large expense to provide. Children, in order to earn a livelihood, are often thrown into association with men and women probably more ignorant than themselves, and certainly more worldly, acquire bad habits, are tempted to vices the results of which they know not, become precocious in crime and immorality, and add either to the criminal classes or the paupers of the community.

I do not think this is exaggeration. Let one of your agents, if the parsimonious Legislature will permit you the luxury, visit any of the cheap balls that are given in our city nightly and report on the character of the attendance. Most of them are girls and boys of eighteen years, who work in the stores, shirt and cigarette factories or other large businesses at a mere pittance, seeking relaxation from the extreme tension of labor or the poverty and misery of home. Their intelligence, if any, is of the lowest character, their ambitions only those of the depraved. I believe the employment of children tends to destroy virtue, morals and love of home, because it prevents a development of the moral faculties and tends to develop other faculties not so desirable. The effect upon the wages of adults by the employment of children, I believe has been to some extent overrated, as I believe the inventions and improvements in machinery, coupled with the subdivision of labor, have opened the door for the employment of children, which heretofore has been closed to them. No one, I take it, desires to stop the use of labor-saving machinery. But every one desires to see the world's workers get the benefit of these improvements by lessening the labor of man and giving generally larger results for the exertions expended. I do not believe that can be secured until we stop fining or taxing men for being industrious, until we remove all restrictions from trade and industry by wiping out all taxes on the products of man's labor. This will enable men to support families and send

children, properly clothed, to school without compulsory laws; for it is a natural feeling with men to rear intelligent offspring. But under the existing conditions I know that the employment of children has lowered the wages of men and women in many industries, because sooner than get no wages at all, the adult would continue at the child's wages, and bring his child with him to the shop to help make up the deficiency. This can be plainly seen in such industries as tinware manufactories, the tobacco factories, and in the large stores where the department system prevails. In these places men and women work side by side with the girl and boy of thirteen, fourteen or fifteen years, at the same rate of pay, because if they do not accept it, children will take their places.

I think that such legislation as compulsory school attendance for at least six months in the year for all children under sixteen years of age, and a factory inspection, coupled with a prohibition of employment of children under fourteen years of age, would at least at present do much to alleviate the evil. Other States have found such laws to work admirably, I am told; and prohibitory laws may mitigate some of the evils of child labor as they exist and are rapidly growing in Maryland.

Very respectfully,

J. G. SCHONFARBER.

WOMAN'S CHRISTIAN TEMPERANCE UNION
OF BALTIMORE CITY,

BALTIMORE, March 7, 1893.

MR. A. B. HOWARD, JR.,

Chief of Bureau of Industrial Statistics:

DEAR SIR—It is with great pleasure that I respond to your inquiry regarding my opinion of child labor and its effects upon the young. The law we now have, allowing no child under 16 years to work more than 10 hours daily, I regard as a stigma upon our civilization. I find upon investigation that even this law is not enforced, and that children of 9 and 10 years of age are employed in stores and factories; and in busy seasons are worked long over the legal 10 hours. I hope this subject will be thoroughly investigated before our Legislature meets next winter, and that we may hope to have a law passed which will protect the children of our State from the close confinement and various objectionable features connected with child labor. It

is most important with this, that a compulsory education law be passed, so that the detrimental influences of a street education may be supplemented by that of the public schools, whereby the children shall receive the education that will fit them to become good citizens and strong men and women, both in body and mind.

Very respectfully,

ALICE C. ROBINSON,
President, W. C. T. U. of Baltimore.

Bishop Paret states in reply to the letter addressed to him, that he has not given the matter sufficient thought to warrant any suggestions on his part which would affect legislation on the subject. Dr. McShane regretted his inability at this time to comply with my request.

Mr. John R. Bland, secretary of the Merchants' and Manufacturers' Association, in a letter under date of November 21, promised a reply "in a few days" for that organization, but none has ever been received at the time of going to press, although a second request was sent him.

Rev. C. R. Weld was not able to give his views owing to sickness, nor was Dr. Gould because he was busily engaged at the time my request was made.

The Federation of Labor passed a resolution refusing to recognize anything emanating from this Bureau, because the Governor did not appoint a member of the organization as its chief.

STRIKES.

The year 1892 will be long remembered in labor circles as being particularly prolific of strikes and lockouts in nearly every part of the country. These constantly recurring crises in the history of labor organizations are hard to explain. Workingmen themselves say that the tendency of large bodies of men banded together is to make demands upon their employers which may or may not be reasonable and just. They then rely upon their ability to temporarily stop the work upon which they are engaged, and thus force the employer to give them a larger share of the product of their labor.

The loss of so many strikes is attributed to the fact that comparatively few men are able to withstand the temptation to return to work when those that are dear to them are in need of the necessaries of life. The most thoughtful and conservative of the workingmen's leaders are practically unanimous in the opinion that strikes should not be undertaken without a very careful consideration of all the circumstances of the case, and then only as a last resort. The enthusiasm that is aroused in labor organizations by the statement of real or fancied wrongs by fervid orators very often leads the organization into positions from which no graceful retreat can be made. At such times the advice and counsel of careful, conservative men are seldom taken, and though much has been learned by hard and bitter experience, the attempts to keep large bodies of men under control are generally unavailing.

As a remedy or preventive of strikes, arbitration has been proposed, and a law regulating such arbitration is now on our statute books, though no recourse was had to it during the year.

The terms of the law are briefly as follows: Whenever any controversy shall arise between any corporation incorporated by this State, in which the State is interested as a stockholder or creditor, and any person in the employment of said corporation, which, in the opinion of the Board of Public Works, shall tend to impair the usefulness or prosperity of such corporation, the Board of Public Works shall have power to demand a statement of the grounds of such controversy, and if there shall be occasion so to do, they shall have the right to propose arbitration; and if the opposing parties shall con-

sent to said arbitration, the Board of Public Works shall provide for the submission of the controversy, so that it may be finally settled; but if either party refuse to submit to arbitration, the controversy shall be examined into by the Board of Public Works and they shall report the same to the next General Assembly.

Whenever such disputes shall arise, either party may demand to have an arbitration in the manner following: Where the party complaining and the party complained of shall come before, or agree by any writing under their hands to abide by the determination of any judge or justice of the peace, it shall be lawful for such judge or justice of the peace to hear and finally determine in summary manner the matter in dispute between such parties; but if they do not agree to abide by the determination of such officers, but shall agree to submit their dispute to arbitrators, then it shall be lawful for any such judge or justice of the peace, and the latter are hereby required on complaint and proof that such agreement for arbitration had been entered into, to appoint arbitrators for settling the matters in dispute, and shall propose not less than two nor more than four persons, one-half of whom shall be employers and the other half employes, acceptable to the parties in dispute, who with the judge or justice of the peace shall have full power to determine such dispute.

When cases are so submitted, they shall be binding and conclusive between the parties. Every judgment so rendered shall have the same effect as if said action had been regularly commenced by due process of law, and execution thereon shall be awarded as upon verdict, confession or non-suit; costs shall be taxed as are now allowed by law in similar proceedings, and shall be paid equally by the parties to the dispute.

Some States have boards of arbitration, and though these boards have been successful in adjusting some labor difficulties, they have for the most part been failures. Workingmen are somewhat doubtful of the effect upon themselves of actively espousing the cause of their fellow-workmen before a board of arbitration. Though some employers would not attempt to rid themselves of such "objectionable" men, yet it is generally believed among leading and influential members of labor bodies that no prominent part can be taken in their organization without laying themselves liable to "blacklisting." They cite numerous instances of this kind within our own borders, and point to many men who were formerly active in the ranks of organized labor in this State

who have been compelled to leave their homes to seek situations in distant cities. This naturally has a very depressing effect upon those who remain, and men are consequently very reluctant to allow themselves to be led into positions which would place them in opposition to present or prospective employers.

In view of these admitted facts, it will be seen that any legislation on these subjects should not be hastily considered, and due regard should be paid to the interests not only of organized labor, but unorganized laborers, as well as the employers of both classes.

CARPENTERS' STRIKE.

The most important and far-reaching strike of the year was that of the Baltimore branch of the Brotherhood of Carpenters and Joiners for the establishment of an eight-hour work day, and was inaugurated May 2.

The agitation for an eight-hour day had been very general throughout the country for a number of years, and at the close of the late Civil War, when the soldiers returned to engage in the industries from which they were drawn, the necessity for a shorter work day became more apparent. The improvements in machinery were also an important feature in this connection. At length, after much agitation, Congress took up the question and passed a law declaring "that eight hours shall constitute a days' work for all laborers, workingmen and mechanics now employed, or who may hereafter be employed, by or on behalf of the government of the United States." This bill was signed June 25, 1868, by President Johnson; and though different constructions were placed upon it by the various heads of departments at Washington, the recognition by Congress of the necessity for the curtailing of the work day gave great impetus to the movement throughout the country.

Labor organizations increased their membership rapidly and the shorter work-day was the chief topic of discussion among the members. At length a general demand was made for eight hours on May 1, 1886. Nearly every large city in the country was affected by the demand, though it was confined, in a great measure, to the building trades. In Baltimore the strike was unsuccessful, though a compromise was reached which enabled the building trades to establish the nine hour day, which continued up to the present year.

The Cigarmaker's Union, however, was successful in its demand, which was doubtless due, in a great measure, to the fact that the

members of that body are employed on a piecework system, and the reduction in their hours of labor caused no considerable loss to the manufacturer.

No further attempt to reduce the hours was made in Baltimore until 1892. In the fall of 1891 the bricklayers, marble and free-stone cutters, granite cutters and hod-carriers determined to secure eight hours, even though it would be necessary to reduce their wages to conform to the reduction of hours. Accordingly on January 1 all the members of these trades, with the consent of their employers, established eight hours as the standard work day, with a corresponding reduction of pay.

At the same time Local Union No. 29, of the Brotherhood of Carpenters and Joiners, appointed a committee to wait upon their employers to ask for an eight hour day and to arrange matters in such a way that the necessity for a strike would be obviated. The reply of a portion of the builders was embodied in a proposition from the Master Builders' Association, which was intended to put an end to all cause for strikes. Their proposition was as follows:

"For the purpose of establishing a method of peacefully settling all questions of mutual concern between the Master Builders' Association and Union No. 29, United Brotherhood of Carpenters and Joiners, they severally and jointly agree that no such questions shall be conclusively acted upon by either body independently, but shall be referred for settlement to a joint committee, which shall consist of an equal number of representatives from each association, and also agree that all such questions shall be settled by our own trade without intervention of any other trade whatsoever.

"The parties herein agree to abide by the findings of this committee on all matters of mutual concern referred to it by either party. It is understood and agreed by both parties that in no event shall strikes and lockouts be permitted, but all differences shall be submitted to the joint committee, and work shall proceed without stoppage or embarrassment.

"The parties hereto also agree that they will incorporate with their respective constitutions and by-laws such clauses as will make recognition of this joint agreement a part of the organic law of their respective associations. The joint committee, above referred to, is hereby created and established, and the following rules adopted for its guidance.

"This committee shall consist of no less than six members, equally

divided between the associations represented, and an umpire, to be chosen by the committee at their annual meeting, and as the first item of their business after their organization. This umpire must neither be a journeyman craftsman nor an employer of journeymen, nor in any way connected with the building trades. He shall preside at meetings of the committee when necessary.

"The members of this committee shall be elected annually by their respective associations at their regular meetings for the election of officers.

"The duty of this committee shall be to consider such matters of mutual interest and concern to the employers and the workingmen as may be regularly referred to it by either of the parties to this agreement, transmitting its conclusions thereon to each association for its government.

"A regular annual meeting of the committee shall be held during the month of December, at which meeting the special business shall be the establishment of working rules for the ensuing year; these rules to guide and govern employers and workmen and to comprehend such particulars as rate of wages per hour, number of hours to be worked, payment for overtime, payment for Sunday work, government of apprentices and similar questions of joint concern.

"Special meetings shall be held when either of the parties hereto desire to submit any question to the committee for settlement.

"For the proper conduct of business a chairman shall be chosen at each meeting, but he shall preside only for the meeting at which he is chosen. The duty of the chairman shall be that usually incumbent on a presiding officer.

"A clerk shall be chosen at the annual meeting to serve during the year; his duty shall be to call all regular meetings and to call special meetings when officially requested to do so by either body party hereto; he shall keep an accurate record of the meetings, transmit all findings to the association interested and attend to the usual duties of the office.

"A majority vote shall decide all questions. In case of the absence of any member, the president of the association by which he was appointed shall have the right to vote for him. The umpire shall have the casting vote in case of a tie."

The reply of Union No. 29 to this proposal was to the effect that the propositions therein embodied were contrary to the general laws of the carpenters' organization, which, they declared, could only be

changed in general convention, and consequently they had to reject this advance in the line of arbitration.

On February 1 the master builders received a communication from Union No. 29, stating that on and after July 5 the journeymen would expect thirty-five cents an hour, and that eight hours would constitute a day's work. The Master Builders' Association replied to this demand, stating that as the Union had refused to accept their plan for an arbitration committee to settle the questions of difference that might arise, they would reaffirm their settlement made with the journeymen in 1886, viz.: "That two dollars and fifty cents shall be the rate of wages, and nine hours shall constitute a day's work.' The matter remained in this position until April 9, when the Union made the demand upon which a strike was ordered, namely: "That on and after May 2 eight hours shall constitute a day's work, and two dollars and fifty cents shall be the minimum rate of wages." The members of the Master Builders' Association declined to accede to this demand, and on May 2 about four hundred carpenters quit work. Thirty-six employers refused the demand and about twenty-five employers conceded it at once. This latter number was afterwards increased to thirty-seven, and of the four hundred carpenters who went on strike first, one hundred and fifty secured places with these employers.

The strike lasted just ten weeks, and during nine weeks strike benefits were paid to each one out of employment at the rate of one dollar a day. In the meantime the bricklayers, stonemasons and stonecutters continued at work until the advent of non-union carpenters on the buildings, when they also struck in sympathy with the union carpenters and declined to resume work until the services of the non-union men were dispensed with.

The number of establishments involved in the strike, the number of days lost by the strikers, amount of benefits paid are herewith given:

Number of establishments, 36; number of men on strike (average), 250; amount received from International Brotherhood of Carpenters $10,000; amount received from other organizations and contributed by local Union No. 29 $5,000; loss in wages, $37,500. In addition to this loss on the part of the carpenters, the bricklayers, stonecutters, stonemasons and others lost more or less time. The bricklayers report that 150 men lost three weeks each, aggregating nearly $10,000. The stonemasons lost no doubt as

much, though they have failed to report the precise amount. In the case of the granite cutters there was very little direct loss, though an indirect loss was caused by builders abandoning their intention of using granite and substituting other material. The extent of this loss, of course, cannot even be approximated. The loss to the employers cannot be estimated, though the delay occasioned in the midst of what promised to be a particularly prosperous season was necessarily very great.

On July 11 the strike was declared off, and the men were instructed to resume work at either $2.25 for eight hours or $2.50 for nine hours. This action was doubtless hastened by the determination of the Bricklayers' and Granite Cutters' Unions to decline to support the carpenters any longer. The employers who had first conceded the eight hour demand returned to the nine hour basis, and the working day remains the same as before the strike.

One of the chief reasons the master builders gave for declining to accede to the carpenters was that a concession would involve the recognition of what is called the "card system." This system would require each mechanic and laborer on a building to have a card certifying to his membership in his particular trade union or the other members of the various organizations would refuse to work on the building. The journeymen, however, denied that this question was involved in the strike, and said there was no desire on their part to change the existing system with reference to cards, which had been in vogue for many years. This denial, however, had no effect on the builders, and in all their public statements great stress was laid upon this phase of the strike.

The strike had a dispiriting effect on the organization, so much so as to cause them to abandon the card system, which had been in force since the formation of the organization. Union men and non-union men now work side by side on the same buildings, and no effort is made to prevent the employment of non-union men.

MILL MEN'S STRIKE.

The strike of the sash and blind workers was for nine hours with ten hours pay, and was started at the same time as the eight hour strike of the carpenters, May 2. At the time of the strike there were about 400 men employed in the various factories. Of this number 200 quit work, the balance remaining in the factories whose proprietors acceded to the demand. The manufacturers who refused

to concede formed an association and made an earnest fight against the men. The hurried work was sent out of the city and a few men were imported to take the places of those on strike. Those imported, however, do not appear to have greatly affected the situation. The Union, which had been in existence but a few weeks, had but little money on hand to support their striking members; and though $1,000 was loaned them by Union No. 29, Brotherhood of Carpenters and Joiners, they were unable to supply the strikers with sufficient funds to maintain them in idleness, and at the end of three weeks all hands resumed work at nine hours with nine hours' pay. They thus gained a nine hour day, though losing one hour's pay.

The number of establishments involved was ten, and the number of men on strike was about 175. There was no set price as compensation, the men receiving from $1.50 to $3.50 a day. Taking $2.50 as an average, it will be seen that nearly $10,000 in wages were lost by the men.

It has been stated by the Union's secretary that since the close of the strike many of the men have had their wages restored to what it was for ten hours' work. They thus claim that in the case at least of the men referred to the strike was a complete success.

GARMENT WORKERS' STRIKE.

The strike of the Garment Workers' Union, which began on July 2, was the most protracted one of the year, and on account of its varying phases attracted a great deal of attention. The causes leading up to the strike were set forth at length by the representatives of the strikers, which were chiefly the "sweating" and "task" systems prevailing in that industry. These two systems are inseparable, and one may be said to be a part of the other. The "sweating" system is one by which the making of clothing is "farmed out" to contractors by the wholesale dealer. The contractors in turn employ the men and women who actually do the work, imposing upon the latter a certain task for which they are paid a specific sum. This system has in every place where it has been instituted resulted in crowding together in comparatively small apartments large numbers of men and women working for long hours and under very unhealthy conditions. To such proportions has this system grown that the House of Representatives, at Washington, appointed a committee to investigate the whole question at the last session.

For several months prior to the strike efforts had been made by

the overworked men and women, many of whom were at the time banded together under the Knights of Labor, to mitigate the conditions under which they were required to work. While negotiations were pending, a large number of the members of the Knights of Labor seceded from that organization and formed a "Garment Workers' Union," attached to the Federation of Labor. It was shortly after that the strike took place and it involved about 1,000 men and women. Their demands were for a ten-hour work day, a weekly payment of wages and the abolition of the "task" system. At the end of two weeks the contractors or "sweaters" agreed to concede the demands of the strikers. Accordingly an agreement was drawn for each contractor to sign, which bound him to certain conditions under penalty of a forfeiture of a bond, which he was required to give. One clause was as follows: "That the said party of the first part hereby covenants and agrees with the said party of the second part that he will only employ members in good standing belonging to local Union of the United Garment Workers of America." This paragraph was construed by the Knights of Labor as a blow at their organization, and they at once took steps to prevent the consummation of what they termed a conspiracy to extinguish them from the labor field. Though a number of the contractors had signed the agreement, they applied for a charter under the Knights of Labor, and it was granted, and many of the contracts were repudiated. Then followed a bitter struggle, not so much between the "sweaters" and their employes as between the two labor organizations. No sooner would one side obtain a temporary advantage than the other would strive to neutralize it.

At length, after the strike had continued nearly three months, the wholesale clothing dealers secured the services of five well-known citizens to act as an arbitration committee. But neither side could agree to any terms of adjustment, and the result was that the matter was left in the same position. But this practically settled the strike, for from that time forward the strikers began to go back to work, many of them being obliged to return upon the contractors' terms.

The organization does not appear to have kept any account of the lost time of its members, and it is therefore impossible to state just how much the strike cost, though it is estimated that $40,000 would hardly cover the loss. For about three weeks at least 1,000 men and women were without employment; but after that time a great many went back to work either in the co-operative shops established

by the men or in the shops of some of the contractors who conceded at once. In many cases they would work for three or four days and would again strike. It is safe to say, however, that about 200 persons lost at least fourteen weeks, which was about the duration of the strike. The families of the strikers suffered a great many privations during the continuance of the strike, and many of them had to depend for their maintenance upon the Hebrew charitable associations. The strike tended to bring about better conditions among those working in the sweat shops. Many who formerly worked fifteen, sixteen and eighteen hours a day, now work but ten, and weekly payments of wages are now said to be the rule. But the other features of the sweating system still prevail. Men and women are still crowded into hot, stuffy workshops, and the competition for employment renders their work far from remunerative. Yet those who are particularly skillful are able to make fairly good wages on the ten-hour a day basis.

STEEL AND IRON WORKERS' STRIKE.

On July 18 about 200 men employed at the Locust Point Iron, Steel and Tin-Plate Works declined to work owing to the company's refusal to accept the scale of wages presented by Baltimore Lodge, No. 1, of the Amalgamated Association of Steel and Iron Workers. It appears that when the mill first started a scale of wages was arranged as follows: Rollers to receive sixteen and one-half cents a box; doubler, twelve and one-half cents a box; the heater, eleven and one-half cents a box; and the catcher, five and one-half cents. About twenty-five boxes are required to make a ton. After running a few weeks under this arrangement the firm refused to longer pay the scale, and the men quit work. In the meantime fire destroyed a part of the mills, and when work was about to be resumed a new scale, which had been adopted by the Amalgamated Association on June 30, was submitted. This last scale was at the ton rate, and was as follows: To the roller, $5.86, out of which he must pay the catcher $2.25 a ton, an increase of seventy cents a ton; $3 for the doubler, an increase of twelve cents a ton, and $2.86 for the heater, an increase of twenty-one cents a ton. The firm refused to sign this scale and most of the men sought situations in other localities. A number, however, remained and went to work upon the terms of the firm, thus ending the strike. As the men were already idle awaiting the completion of the mills, this was not strictly speaking a strike though it was so termed by the men.

CIGARMAKERS' STRIKE.

The Cigarmakers' Union had but one difficulty with their employers during the year, and that was confined to one factory and included but thirteen members. The strike or lockout began on January 29, and lasted twenty-five weeks, during which time the Union did all in its power to bring about a settlement on its own terms, but without avail. After that time the matter was allowed to drop. There are conflicting statements as to the cause of this strike, the Union men declaring that it was a strike against a reduction, while the employer says there was no thought of a reduction, and his only reason for deciding to carry on a non-union shop was that he wished to conduct his business without what he considered the unwarrantable interference of the Union.

During the strike the sum of $441.60 was paid out in benefits to the strikers by the Cigarmakers' International Union and $846 was lost in wages. The factory remains a non-union one.

MISCELLANEOUS STRIKES.

On January 18, 1892, twenty-one stove molders employed at the establishment of Armstrong & Co., at Perryville, went on a strike owing to a refusal on the part of the firm to recognize the Iron-molders' Union, of North America, with which organization the molders employed by Messrs. Armstrong & Co. were connected. The strike has never been declared off, though other molders have been employed to take the places of the strikers. The loss in wages to the men was very small, as they very soon secured employment in other establishments.

On June 4 two of the employes of one of the Baltimore cigarette factories were discharged by their employer. The employer claimed that one of the men was discharged on account of incompetency, while the other was discharged for an alleged attempt to intimidate his fellow-workers and compel them to join the Cigarette Workers' Union. Upon their discharge some fifty or sixty men and girls went on strike. Their organization was only partially effected at the time, and there being no funds on hand to support any number of strikers, the contest was but short. In a few days all of those who went on strike returned to work. The employes are all Hebrews.

On August 9 about sixty men employed at the Mount Clare shops, of the Baltimore & Ohio Railroad, most of whom were

Bohemians and Germans, went on strike against a reduction of wages. It was claimed by the strikers that before the reduction they were able to make from $60 to $75 a month and that the reduction only enabled them to make about $1.10 a day. The strike was extremely short-lived, as in a few days most of the men resumed work upon the terms of the company.

About 100 men went on strike on March 10 at the Columbian Iron Works, owing to a dispute with their employers on account of the employment of unskilled labor upon skilled work. The contest lasted but a few days and was settled satisfactorily by mutual concessions.

COAL STATISTICS.

The fact that the mine owners of Allegany county are required to pay employes the full amount of their wages in the legal tender of the United States, and any contract between parties to the contrary is void, is a strong factor in making the miners of this region a prosperous and contented people. The legal days' work in the region is ten hours, beginning at seven o'clock in the morning, but miners can contract to work longer hours, such time to be paid for as overtime. No premium is put upon laziness, and the result is that the miners of Maryland rank ahead of workmen engaged in many other vocations. The mining population is composed largely of emigrants from England and Germany, the number of negroes employed being very limited. Though Maryland is classed as a Southern State, negroes compose less than three per cent. of the combined population of Garrett and Allegany counties, which embrace the coal region. The miners from England have in a manner been educated to this hazardous employment. Many of them entered the mines at their old homes when not more than eight years of age, and were well skilled in their craft before coming to the United States. They have in turn educated their sons in the art of mining, though in this region a boy must be fourteen years of age before he can be employed in the mines. A few years ago boys of ten and twelve years were taken into the mines as "half turns." The increase in the limit of age has had a beneficial effect on the children. It is true that it means a few more years of hard labor for many a father whose twelve-year-old son could materially assist him in providing food, clothing and all the necessities of life for a house full of younger children, for the number of children in each miner's family is rarely less than six or seven. The time elapsing in a boy's life between the ages of six and fourteen can be profitably occupied in acquiring his scholastic education, for after he commences work in the mines there is little time for study. The public schools are in a prosperous condition, and a studious boy can be well grounded in the fundamental principles of the English language, and have a fair enough knowledge of mathematics to carry him successfully through life before he enters

the mines. After that time his education is mainly what he acquires from books, periodicals, newspapers and his contact with men of the world. Most of the miners of Allegany county are fond of reading, and many of them have collected good libraries, while the number of newspapers and magazines distributed through the various post-offices is far beyond that in any of the other counties in the State having about the same population. Churches are well attended and supported, and the great majority of the miners are members of various societies and orders of a beneficial character. Much of the leisure time in the evenings is spent in the lodge room, and here the men have many opportunities to argue questions and practice the art of speech-making. This training is valuable, as has been proven in the halls of legislation, when some of the ablest representatives have come from the mines of Maryland. The miners take an active interest in political questions, and generally exercise care in the selection of their representatives and vote intelligently on the questions of the day.

The coal field of Maryland is situated between Savage and Dan's Mountains, in Garrett and Allegany counties. The basin is about twenty-five miles long and about five miles broad, though not more than half of this is covered by actual mining operations. A transverse ridge connects the Savage and Dan's Mountains and determines the two opposite directions of drainage. Three-fourths of the basin is drained by the George's Creek and its tributaries, thus giving to the coal of this region the title "George's Creek Coal." The mountain ranges are filled with veins of varying thickness, though little attention is paid to any except the one known as the "Fourteen Foot Seam." This bed of coal is remarkable for its form and thickness. The lower portion of the coal bed, commonly called "bottom" coal, contains two small seams of slate, each about an inch in thickness, which separate it from what is known as the "breast" coal or middle portion of the vein. For many years this "bottom" coal was sacrificed and much valuable coal wasted; but in the light of improved systems of mining, it has been found that the small seams of slate can be easily separated from the coal, and the "bottom" coal preserved. Tests have been made and the fact proven that for generating steam "bottom" coal was equal to, if not superior to "breast" coal. This discovery has been a valuable one, for it means a longer lease of life for the big vein. In the competing coal regions of West Virginia and Pennsylvania there is found vastly more slate

than is to be found in the portion of our own coal formerly left unmined. The seam of "bottom" coal is about three feet thick, and is, in fact, similar to that found in the Clearfield regions.

While comparatively little attention has been paid to the small veins of the region, their value must not be overlooked. What is known as the "Four Foot Vein" is next the "Big Vein" and lies about eight hundred feet below it. There are good opportunities of mining this vein, as in places it is sixty feet above water level. The "Six Foot Vein" lies one hundred and sixty feet below the "Four Foot Vein," and only part of it is above water level. It is estimated that about 27,000 acres of coal are contained in these two veins. According to an estimate made in 1854, the "Big Vein" contained 354,933,333 tons of coal, the "Six Foot Vein" contained 774,400,000 tons and the "Four Foot Vein" 454,000,000 tons. The total shipments from the region to the middle of November, 1892, have amounted to 67,885,028 tons. This amount deducted from the estimated number of tons contained in the field would leave 1,515,448,305 tons. While it is probable that with improved machinery the output can yearly be largely increased, it is safe to predict that several generations will live and die before the vast storehouses of wealth in the Allegany Mountains will be depleted.

According to a test made in 1844 it was found that a bushel of coal from the George's Creek region will generate more steam than the same amount from any region in the country. The reason is this: It contains enough bitumen to make it readily inflammable and does not deaden a fire with each fresh addition, thus lessening the amount of steam until the combustion of the fuel takes place. It has enough carbon to maintain a uniform heat for a long time, a small percentage of ashes, very little nitrogen and water, and is comparatively free from sulphur. For smithing purposes it is invaluable and finds a market all over the world. It makes a bright fire and gives out a steady heat. The following analysis represents the composition of the "Big Vein" coal:

Carbon	88.05
[Hydrogen, Oxygen, Nitrogen, Sulphur, a trace]	8.54
Ashes	3.41
Specific gravity	1.32

The following statement is taken from a table compiled for the Senate of the twenty-eighth Congress:

Name of Coal.	Percentage of fixed carbon.	Pounds of steam furnished by one cubic foot of coal.	Reducing power. Parts of lead from litharge by one part coal.	Forge power. Number of links of chain cable 1⅛ inches by 60 pounds coal.	Total waste in ashes and clinker to 100 parts.
Lehigh (anthracite).....	89.15	494.0	28.92	...	17.22
George's Creek (bituminous)	75.05	530.1	33.60	20	9.94
Pennsylvania (bituminous)..	74.24	472.8	31.18	14	16.36
Virginia (bituminous).....	53.01	448.5	29.03	14	14.83
Picton, Nova Scotia.....	60.74	417.9	26.69	11	12.06
Liverpool.....	54.90	375.4	27.88	13	5.04

In the past few years shipments of coal to the seaboard have been greatly retarded by the scarcity of cars. Lately, however, there have been built for individual companies about 600 hopper-gondolas, the greater number of which have a capacity of 60,000 pounds and the remainder 40,000 pounds. This has proved of great benefit, but still there is a scarcity. Scarcity of cars has greatly interfered with the prosperity of the region during the past year, 1892, and the output was over 350,000 tons less than in 1891. Some of the mining companies complain very much of the lack of transportation facilities, and say that their trade has been injured. It is true that the mines of some companies have run along on telegraph orders from the East and were barely able to fill their large contracts, while the local and line trade, which required years of good management to secure and retain, had to remain unsupplied or be satisfied with an occasional shipment. Manufacturing concerns and small consumers have had empty cars consigned to the mines and ordered their return laden with coal. After patient waiting, inquiry at the mines developed the fact that the cars had never been received. A tracer sent out found the cars doing service in the general freight traffic of the road. These are instances of the annoyances, delays and losses occasioned by a scarcity of cars.

The coal is transported from the mining region to Cumberland *via* the George's Creek and Cumberland, and the Cumberland and Pennsylvania Railroads. This latter road connects with the Baltimore & Ohio at Piedmont, W. Va., thirty-four miles west of Cumberland. The distance from Piedmont to Baltimore *via* the B. & O. is 206 miles, from Cumberland to Georgetown *via* the Chesapeake

& Ohio Canal 184 miles, and from the State line *via* Pennsylvania road to Amboy 365 miles. It is gratifying to note that shipments over the Chesapeake & Ohio Canal this year amounted to over 265,000 tons. This is rather in the nature of a surprise to many who firmly believed that the great flood of 1889 had wiped the old water-way out of existence. A vast outlay was required to put it in repair, but it has given an impetus to trade in all sections along its banks. The completion of the repairs to the canal in August, 1891, resulted in the immediate resumption of shipments by that route, and at the close of the year 1891 reports showed that over 50,000 tons of coal had been transported over its waters.

Regarding the subject of ventilation, the Act of 1880, chapter 273, provides for a mine inspector who is appointed by the Governor of the State for a term of two years. He qualifies under oath, and is required to have competent knowledge of coal mines and nature of constituent parts of noxious gases and means of expelling them. He is required to inspect all the mines in Garrett and Allegany counties once a month and oftener if necessary; to see that every precaution is taken to insure safety of workmen; that pure air ventilation is maintained throughout all workings, so as to expel noxious gases, to avoid danger to life; to see that every mine owner employs a competent and practical inside overseer, whose duty it is to keep a careful watch over air ways, traveling ways and timberings, also air doors used in ventilation, which are required to be automatic, and to see that all loose coal and rocks overhead are secured against falling, to provide for the safety of men and to report to the owner anything unfit for mining purposes about the mine. When notified of the existence of impure or noxious gas in the mines, it is his duty to inspect the same and to notify the owner, and if necessary to expel the same.

In the past few years many improvements in the methods of ventilation have been made. In many places artificial ventilation is taking the place of natural. An example of this is found at the "Dug Hill mine," of the George's Creek Coal and Iron Company. There the ventilating fan is on the exhaust plan. The wheel is sixteen feet in diameter, and gives ventilation to every part of the mine. It is operated by a twenty-five horse-power engine that has been running for over four years without any stoppages. It is supplied with steam from the boiler in the engine house.

The Consolidated mines are ventilated by fans, and those of other

companies by means of furnaces. Maryland miners are fortunate in having none of the explosive gases to encounter. Only in the old workings is to be found any trace of "black damp." It is gratifying to report that companies are vieing with each other in operating their mines on the best known systems, and affording employes the best possible advantages.

The occupation of a miner is a very hazardous one; but as all due care is exercised by the mine owners and those in their employ, accidents are less numerous than a casual observer might judge they would be. It is the duty of the inspector to see that the owners supply at the place where the miners work all timber necessary. "Props" are used for the support of the roof and are usually from six to nine inches in diameter, and seven to eight feet long where only "breast" coal is worked, and from ten to eleven feet long where "bottom" coal is worked. They are surmounted by a "cap" piece six to ten inches in width, two to three inches thick, and from two to three feet long. When fastened securely they give substantial support to the overlying strata of top coal, slate, &c. As the excavation advances the miner is protected from the falling of the roof coal and slate by this method of timbering.

It is a remarkable fact that out of 3,070 men employed in mining coal and 875 other employes in the mines of the region, there were but nine fatal accidents during the year 1891 and six in 1892. Some of the victims had been engaged in the work for over forty years, and their death could hardly have been the result of carelessness. Only a small proportion of the accidents are attributable to this cause. Owing to the peculiar formation of the coal they are unavoidable, but the death rate is comparatively small.

The method of mining coal in the George's Creek region differs from that of any other coal region in the country. The coal is divided into blocks by what are technically known as "slips"—that is, a parting or division in the body of the coal. These "slips" run on an angle of about forty-five degrees, make a distinct parting in the coal, and extend from the "bottom" coal up through the "breast" and "top" coal to the slate above. They run in every conceivable direction and render the use of powder or other explosives in mining totally impracticable. The work of mining the coal, therefore, is one of sheer manual labor with pick, shovel, wedge and sledge. The face of the coal vein in the mine exactly resembles the blank wall of a room. The operation of mining a "breast" of coal

is, first, to "undermine" it to a depth of from two to five feet, varying according to the solidity of the coal, if it proves to be loose and yielding, or likely to be so when "trimmed up."

The careful miner will "undermine" it about two feet and do the work in a standing position, so as to afford him a reasonable chance of escape should the coal suddenly give way. Should the coal prove solid and firm, it is "undermined" to a depth of from three to five feet. This is done, first, in a standing position, and when the miner cannot reach under the coal any further, he lies on his side and completes the work. In this manner the coal is "undermined" to a sufficient depth without producing much "slack" coal. The next process in the operation is "cutting" or "shearing" the coal—that is, cutting on each side of the "room" or entry to a depth equal to the undermining. The miner works first on his knees to accomplish this part of the work, and completes it in a standing position. While thus engaged the accumulating "slack" coal affords him some protection from accident from a sudden fall of the coal. The "cutting or "shearing" is from twelve to eighteen inches wide at the "face" of the coal and narrows down to a few inches at the back. It extends from the bottom of the "room" to the top, and thus with the undermining leaves the "breast" ready [in technical terms] to "take down." The "taking down" process is commenced by "scutching" or "squaring" the coal. All the rough corners and small portions of "slips" on the "face" are removed, and when the "scutching" is well done, it leaves the "breast" divided into huge masses, and with all the "slips" exposed. Then, with one or two wedges, properly placed and carefully driven, the coal is brought down in large lumps often weighing from one to three thousand pounds. It is while this class of work is being done that the greater number of accidents occur. A miner may be deceived by the "sound" of the coal, and be crushed while lying down undermining. Again the "sound" of the "top" coal may induce him to postpone setting a prop under the dangerous roof which suddenly falls, and maims or kills him. Indeed, this "top" coal is particularly dangerous, and has been the cause of the death of many unfortunate miners.

In mines where the bottom coal is taken up the same methods of mining are adopted, and as the excavation of the "breast" coal advances the "bottom" is allowed to remain until it is about ten feet back when it is taken up as fast as the excavation of the "breast" advances.

The cost of mining can only be estimated, for the reason that operators consider that their own private business, and all efforts to secure definite figures have been futile. The price paid per ton for mining throughout the region is fifty cents for a ton of 2,240 pounds. The outside expenses attending the production of one ton average about thirteen cents, so that all told a ton of coal aboard the cars is estimated to cost sixty-three cents.

The wages of drivers average $1.85 a day, that of laborers $1.60, carpenters $2.15, blacksmiths $2.25, engineers $2.60, roadmen $2.10. The companies charge the men one cent a ton for sharpening tools. This amount, together with fuel purchased from the company, house rent, when the house occupied by the miner is owned by the company, and fees for medical services when the miner so desires, are deducted at the company's office on pay day, which comes about the 15th day of each month.

It is a noteworthy fact that many of the miners own their own homes, and while times have been comparatively dull during the past year, the building of comfortable homes throughout the mining region has gone on and indications of prosperity have been visible.

For many years, miners, and, in fact, all heads of families have received medical services under a contract which has, judging by the length of time it has been in vogue, been mutually beneficial to the physician and patron. Each man pays one dollar per month, and for that consideration he and all members of his family, except there may be sons over twenty-one years of age, receive medical treatment and all medicines prescribed. The families in the coal region are fortunate in having the services of very skillful physicians at an extremely moderate rate. Young men over twenty-one years pay the same fee as the heads of families.

It is the duty of the mine inspector to inspect the weights and scales used at the mines and to ascertain whether miners are allowed full weight. The weigh-masters of the various mines are required to make oath before entering on duty that they will perform their duties with honesty and fidelity, and will credit each man or men the correct weight of the coal mined by him or them, allowing 2,240 pounds to a ton. Any discontent arising from this subject can be promptly remedied by applying to the mine inspector.

There is a disposition on the part of the various companies to test the smaller veins as to their value as coking coal. Not a few of the former inspectors and men interested in this coal region claim that

for coking purposes the smaller veins would prove of great value and result satisfactorily in the production of a superior grade of coke. It certainly will be to the interest of all persons owning mining properties to fully investigate the coke possibilities of the region, and I hope to report fully and favorably on the subject at a future date. The general feeling existing between employers and employes throughout the region has been of the kindliest nature. No material differences have arisen and all have worked harmoniously. The following table shows the shipments of the Maryland mines from January 1 to December 31, 1892, and the number of men employed:

Table showing shipments of Maryland Mines for 1892.

Companies.	Tons. Cwt.	No. of Men Worked.
Borden Mining Company	253,629.05	300
Consolidation Coal Company	912,787.01	1,120
Union Mine	176,995.15	225
George's Creek Coal and Iron Co	297,632.02	426
Swanton Mining Company	5,162.00	50
Potomac Coal Company	137,737.12	169
Franklin Consolidated Coal Company	72,117.03	125
Piedmont Cumberland Coal Company	14,563.18	65
Barton and George's Creek V. C. Co	201,364.19	279
Big Vein Coal Company	66,683.13	100
Anthony Mining Company	10,664.17	25
American Coal Company	384,681.03	390
New Central Coal Company	201,428.02	265
Maryland Coal Company	280,945.12	401
Total	3,016,388.22.	3,980

Opposite is given a statement of the mining operations for the year 1891, showing the number of men employed, and the amount paid for wages:

Statistical Analysis of the operations of the Mines of Allegany and Garrett Counties for the year 1891.

Name of Company.	Output of coal of each company.	No. of miners employed.	Amount paid miners.	Amount paid miners per capita.	No. of other employes.	Amount paid other employes.	Amount paid other employes per capita.	No. of days worked.	Amount paid for supplies and improvements.	Total amount paid by each company.
Consolidated Coal Company	910,977	939	$ 487,550	$ 519.20	227	$ 109,717.37	$ 483.30	231	$ 50,157.80	$ 644,425.87
Maryland Coal Company	406,464	321	203,232	633.12	77	40,483.52	525.66	248	40,646.40	284,357.92
American Coal Company	449,630	297	227,451	765.83	101	51,607.51	510.00	281	44,963.00	324,021.51
George's Creek Coal and Iron Company	356,927	241	167,515	695.50	90	38,834.58	434.79	287	32,586.27	238,935.85
Borden Mining Company	300,268	260	153,902	491.16	48	18,480.00	385.00	220	30,026.80	202,408.80
New Central Coal Company	266,813	184	105,981	578.77	54	22,132.98	428.38	274	20,681.30	148,795.28
Barton and George's Creek Valley Coal Company	201,124	210	106,732	580.00	51	24,543.75	479.20	275	20,112.40	151,387.77
Potomac Coal Company	184,706	143	91,676	642.60	51	23,850.00	467.50	265	18,470.60	136,936.60
Union Mine	179,232	200	95,090	476.14	60	25,030.00	417.00	275	21,426.00	141,550.00
Franklin Consolidated Coal Company	76,593	86	35,705	430.50	44	17,107.86	385.50	182	8,541.86	61,354.72
Big Vein Coal Company	62,832	85	28,460	334.50	20	9,652.00	482.00	225	5,270.00	43,382.50
Piedmont Cumberland Coal Co	42,439	60	21,867	364.45	35	9,477.82	270.50	310	8,263.68	39,608.50
Swanton Mining Company	33,029	42	16,844	416.50	8	2,800.00	350.00	250	3,302.90	22,946.90
Anthony Coal Company	9,725	.....	.....	.....	.....	.....	.....	.....	.....	.....

The great importance of the coal measures to Western Maryland and the State at large is sufficient reason why the details should be given, necessary to a correct understanding and full appreciation of the resources of this region. Professor Philip T. Tyson, some years ago, then State geologist of Maryland, through careful surveys, drew a section showing the whole series of strata included in these coal measures, and gave measurements of all the beds of coal in their order of succession from above downwards. For purpose of reference the table is here reproduced, which shows the altitude above the sea, the relative position and thickness of the coal strata and of all the intervening members of the series.

Table of Strata of the Potomac and George's Creek Coal Basin.

	Feet.	Inches.
2065—Shale	1	6
Coal	2	6
Shaly sandstone	19	
Shale	23	
Coal	6	
2000—Limestone, with seams of shale	12	
Fire-clay	13	9
Undetermined	3	9
1950—Shale, with a few nodules of iron ore	27	3
Shale	27	9
Sandstone of fine grain	3	6
Shale	2	6
Coal, with two inches of shale	4	3
Fire-clay	10	
1900—Coal	3	
Fire-clay	3	
Shaly sandstone Micaceous sandstone 1850—Coarse sandstone	51	
Shales, with unimportant nodules of iron ore	42	6
1800—Coal	4	6
Shale	2	
Coal	1	
Shale	4	9
Coal		10
Shale	1	3
Shaly sandstone	1	
Ferruginous shale	4	8
Main Coal Bed	14	
Iron ore, in bands or layers		4
Shale	11	8
Fire-clay	3	
1750—Limestone	1	6
Shale	15	6
Sandstone, of fine grain	29	
1700—Shale	27	6
Coal	2	6
Shale	4	
Coarse iron ore in shale		8

		Feet.	Inches.
1700—	Shale	16	
	Ferruginous shale	1	
	Coal	3	9
	Shale	1	
	Iron ore in shale	2	6
	Iron ore in fire-clay	3	
	Coal	1	6
	Shale with iron ore		7
	Fire-clay with iron ore	2	
	Shale	6	
	Coal	1	6
	Shale	2	6
	Fire-clay with iron ore	5	6
	Sandstone	1	6
	Iron ore in shale	6	6
	Shale with iron ore	6	6
	Iron ore		7
	Shale with iron ore	4	3
1650—	Coal		6
	Iron ore		6
	Coal	1	6
	Shale	2	
	Coal with shale	2	3
	Iron ore in shale	2	2
1600—	Coal	2	1
	Shale		6
	Fire-clay with iron ore	2	8
1597—	Shale with iron ore	4	10
	Iron ore in shale	2	6
	Blackband iron ore	1	6
	Coal		4
	Shaly sandstone	2	
	Shale	4	6
	Coal	2	6
	Limestone	3	
	Fire-clay	3	6
	Coal		8
	Shale	1	6
	Highly ferruginous shale	1	6
	Shale	1	
	Coal	1	3
	Shale	1	3
	Coal	1	6
	Shale	1	6
	Coal	1	6
	Shale	2	8
	Sandy shale with iron ore	5	
1550—	Shaly sandstone	8	
	Shale	4	6
	Coal	1	6
	Fire-clay	7	4
	Ferruginous shale	2	
	Shale	1	
1500—	Sandstone	39	
	Shale	15	
	Iron ore in fire-clay	3	
	Limestone	6	
	Iron ore in fire-clay	2	
	Shale	10	

		Feet.	Inches.
1500—	Sandstone	44	
	Coal	1	8
	Shale		10
	Limestone	2	2
	Sandstone	23	6
	Shale	6	
	Stratified iron ore	6	
	Ferruginous shale	6	
1350—	Shale	4	6
	Coal	5	8
	Sandy fire-clay	4	
	Shaly fire-clay with iron ore	6	
	Limestone	6	
1300—	Sandstone	33	
	Shale	9	6
	Shale containing iron ore, a layer of marine shells and iron ore in the lower layers	11	
	Coal		2
	Shale	6	
	Coal	2	2
	Shale	14	
1250—	Coal	4	
	Shales, fire-clay and sandstone	25	6
1220—	Coal	2	
	Strata consisting principally of sandstone	102	
1100—	Shale, the upper layers ferruginous	24	
	Coal	6	
	Fire-clay	3	
	Shale with iron ore	6	
	Unexplored	27	
	Coal	3	
	Shale		4
	Sandstone	19	
	Shale and fire-clay	20	
	Coal	1	6
1000—	Fire-clay	10	
	Sandstone	92	
900—	Iron ore in shale	3	
	Shale	14	6
	Coal	2	6
	Shale		3
	Sandstone in thin layers	12	3
	Coal	2	
	Shale	2	6
850—	Sandstones	42	6
	Iron ore in shale	7	6
	Principally sandstones, but little explored	83	
750—	Coal	2	6
	Sandstone in thin layers	27	
	Coal	2	
	Shale		3
520—	Principally coarse sandstone, the lowest rock of this coal field	160	

Statement of appropriation and expenditures for Bureau of Industrial Statistics for the fiscal year ending February 28, 1893.

Amount of appropriation, March 1, 1892	$ 5,000.00	
Salary of Chief of Bureau		$ 2,500.00
Other salaries		1,031.13
Furnishing and equipping office		321.64
Stationery		100.44
Office rent		170.00
Postage		85.39
Traveling expenses		74.39
Fuel		24.38
Daily newspapers		17.71
City and State directories		12.00
Towel Supply Co		11.00
Ice		6.35
Gas		1.00
Extra work on coal report		10.75
Printing report		550.00
Extra printing		15.00
Expenses for sending out reports		58.44
Incidental expenses		10.38
Totals	$ 5,000.00	$ 5,000.00